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September 1, 1969

RAILWAY AGE

THE TRANSPORTATION WEEKLY

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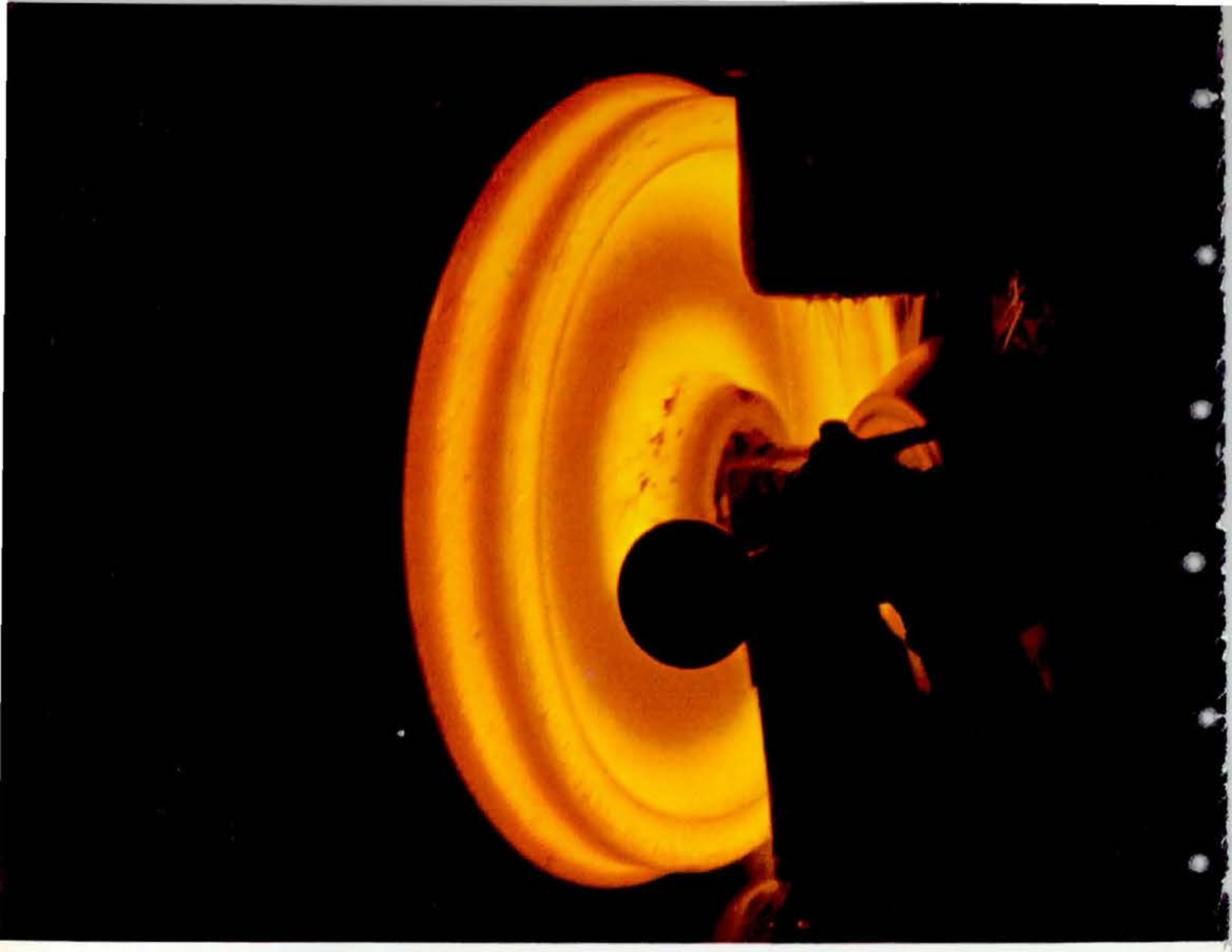
MBTA UNVEILS ITS "COOL" CARS



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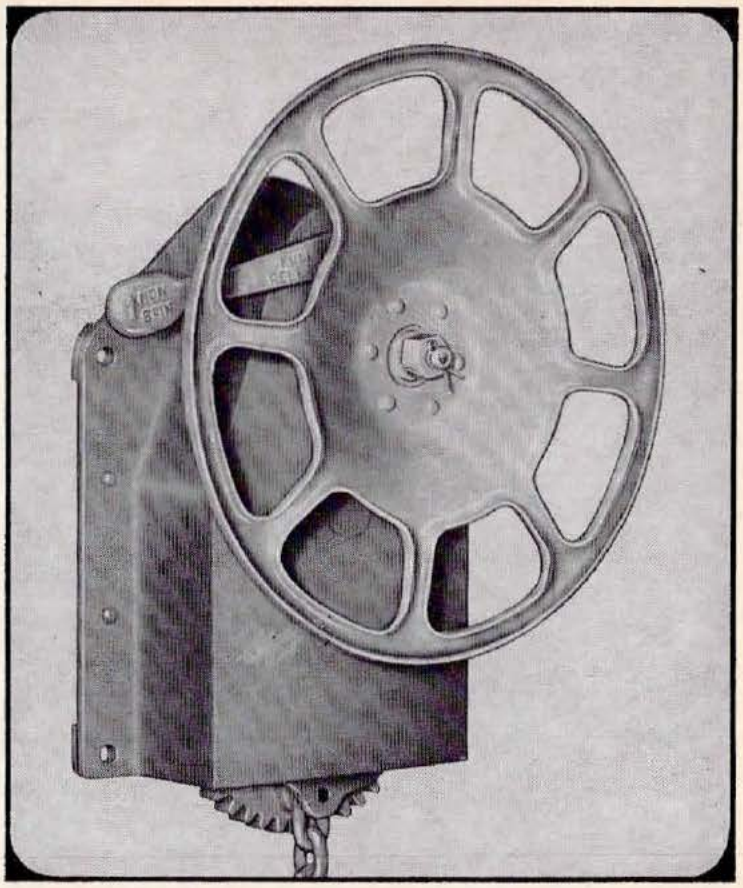

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Circle 3 on coupon page 31

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RAILWAY AGE

September 1, 1969 • Vol. 167, No. 9

THIS WEEK

14 Air-conditioned transit cars for Boston
The first group of cars will enter revenue service soon.

22 Operation headstart, Mexico City style
Phase I of the Mexico City Metro has been completed.

23 Chicago transit takes advantage of the highway
Median-strip operation is expected to begin this Fall.

28 Transit strategists will try to strengthen Nixon bills
Criticism of the President's program is accumulating rapidly.

40 Viewpoint—Narrowing the gap
How NP brings academics and railroaders closer together.

DEPARTMENTS

25	As the Editor Sees It	7	Short and Significant
33	Freight Carloadings	38	Supply Trade
37	Letters from Readers	32	Transit Personnel
12	Lines on Labor	19	Transit Roundup
8	Monday Morning Report	40	Viewpoint
33	New Equipment	18	Watching Washington
31	New Products Report	11	Week at a Glance
30	People in the News	36	You Ought to Know

. . . AND COMING NEXT WEEK

Railroads in the state of Illinois are undergoing an unprecedented experience—a statewide inspection of their properties and practices by representatives of the Illinois Commerce Commission. The Sept. 8 Railway Age will take a two-part look at the situation: Part I consists of an interview with the commission's chief railroad engineer, and Part II is an on-the-spot description of one of the inspection trips.

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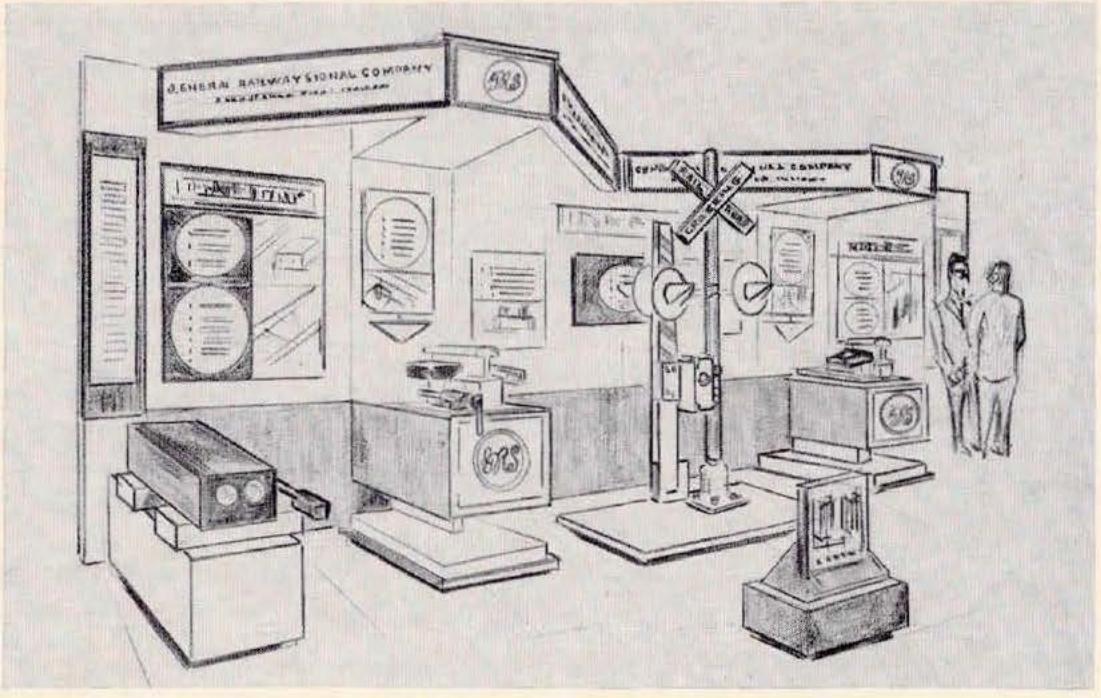
Railway Age, established in 1856, is indexed by the Business Periodicals Index, the Engineering Index Service and the Public Affairs Information Service. Name registered in U.S. Patent Office and Trade Mark Office in Canada.
Published weekly (except for four issues combining two-in-one) by the Simmons-Boardman Publishing Corporation, 508 Birch St., Bristol, Conn. 06010.
Railroad employees' subscription rate, U.S. possessions, Canada and Mexico, $6 one year, $9 two years, all others $15 for one year, payable in advance and postage paid. To railroad employees elsewhere in the western hemisphere, $10 a year; in the eastern hemisphere, $15 a year. Single copies 60¢, except special issues.
Address all subscriptions, change of address and correspondence concerning them to Subscription Dept., Railway Age, P.O. Box 961, Bristol, Conn. 06010.
Change of address should reach us three weeks in advance of next issue date. Send old address with new enclosing, if possible, your address label. Post Office will not forward copies unless you provide extra postage.

Circulation Dept.: John Rogers Director of Circulation, 30 Church St., New York, N.Y. 10007. POSTMASTER—SEND FORM 3579 TO P.O. Box 961, BRISTOL, CONN. 06010.
Printed at the Hughes Printing Co., 34 North Crystal St., East Stroudsburg, Pa. 18301. Second-class postage paid at Bristol, Conn., and at additional mailing offices.

See the GRS exhibit

Booths 10 and 11

At the AAR C&S Sec. Annual Meeting, Queen Elizabeth Hotel, Montreal
September 16—18



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See **Solid-State Retarder Motor Control**

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SHORT AND SIGNIFICANT

ICI holders approve a stock split

Shareholders of Illinois Central Industries have approved a three-for-two stock split, with record date of Sept. 4. ICI Chairman W. B. Johnson said the move "will bring the price of shares of common stock to a more attractive level and will help to broaden stock ownership and also increase public interest in the services offered by our member companies."

UP to build huge diesel shop at Bailey Yard

One of the most elaborate and complete locomotive service/maintenance/repair facilities to be built by any U.S. railroad is now scheduled for construction by Union Pacific at Bailey Yard. Four hundred or more locomotives will be maintained at the North Platte, Neb., plant—which will be designed to service and repair up to 200 units per day. Says UP President Edd H. Bailey: "We plan to do the annual ICC inspection of a unit in eight hours, completing required inspection and programmed maintenance, or completely overhaul a unit in 24 hours."

The shop complex will be spread over 156 acres south of a recently-installed diesel fueling station. The main shop building, with 140,000 square feet of work space, will have 11 through tracks—four for heavy repair, three for running repair, two for inspection, one for wheel-truing and one for material and supply flow. All except the material-and-supply track will be equipped with under-track pits and elevated platforms. UP will also install outside locomotive pits and a separate locomotive wash building and drip tracks.

UP plans to get construction started before the end of the year; no completion date has been set.

In full operation, the shop complex will operate around the clock, with a work force of about 400 men.

Santa Fe plans $31-million pipeline project

Santa Fe Industries, through subsidiary Santa Fe Pipeline Co., is moving ahead with plans to build its proposed Chaparral Pipeline, for movement of natural gas liquids from the Permian Basin of West Texas and New Mexico to the Gulf Coast near Houston. Santa Fe had indicated earlier this year that the line would be installed if sufficient throughput agreements could be obtained from the petroleum industry (RA, Feb. 17, p. 7). The $31-million Chaparral line will originate at various points in the Permian Basin. From Snyder, Tex., to Mont Belvieu, near Houston, it will generally follow Santa Fe Railway right-of-way. Capacity of the line will be 60,000 barrels per day. Construction is scheduled to begin next spring, for a Jan. 1, 1971, transmission startup.

Symposium will explore electrification

Railroad electrification will be a major subject on the agenda of the First International Electric Vehicle Symposium to be held in Phoenix Nov. 5-7. Peter McTague of Gilbert Associates will lead the discussion. The symposium is sponsored by the Electric Vehicle Council, a New York-based organization "devoted to the advancement of electricity as a form of motive power." Some 300 participants from 10 nations are expected.

WABD is licensee for British adhesion booster

An adhesion improving plasma torch developed in Britain has been licensed to Westinghouse Air Brake for marketing in the U.S. Emission of an ionized gas from low-voltage, high-current "guns" over the rail eliminates molecules of grease and other foreign matter which cause loss of traction. The Plasma Jet Adhesion Boosting System is seen as raising the acceleration and deceleration capabilities of locomotives and rapid-transit cars. WABD will soon begin testing at its Wilmerding, Pa., plant in cooperation with engineers of Tetronics Research & Development Co. Ltd. Field tests are to start early next year. It is planned to investigate factors involved in the use of the equipment and to make sure that the system is compatible with railroad and mass-transit environments.

MONDAY MORNING REPORT

THE RAILROAD SAFETY STORY

Official railroad safety statistics would make eye- and mind-opening reading for professional, and amateur, pointers of fingers of scorn. No doubt there is room for improvement, so far as railroad safety is concerned. "Railroaders," says AAR Vice President James A. Schultz, "have never questioned this—and hopefully, until that day of absolute perfection arrives, they never will." But there is also room for a better understanding of the railroad safety record.

THOSE GRADE CROSSING FIGURES

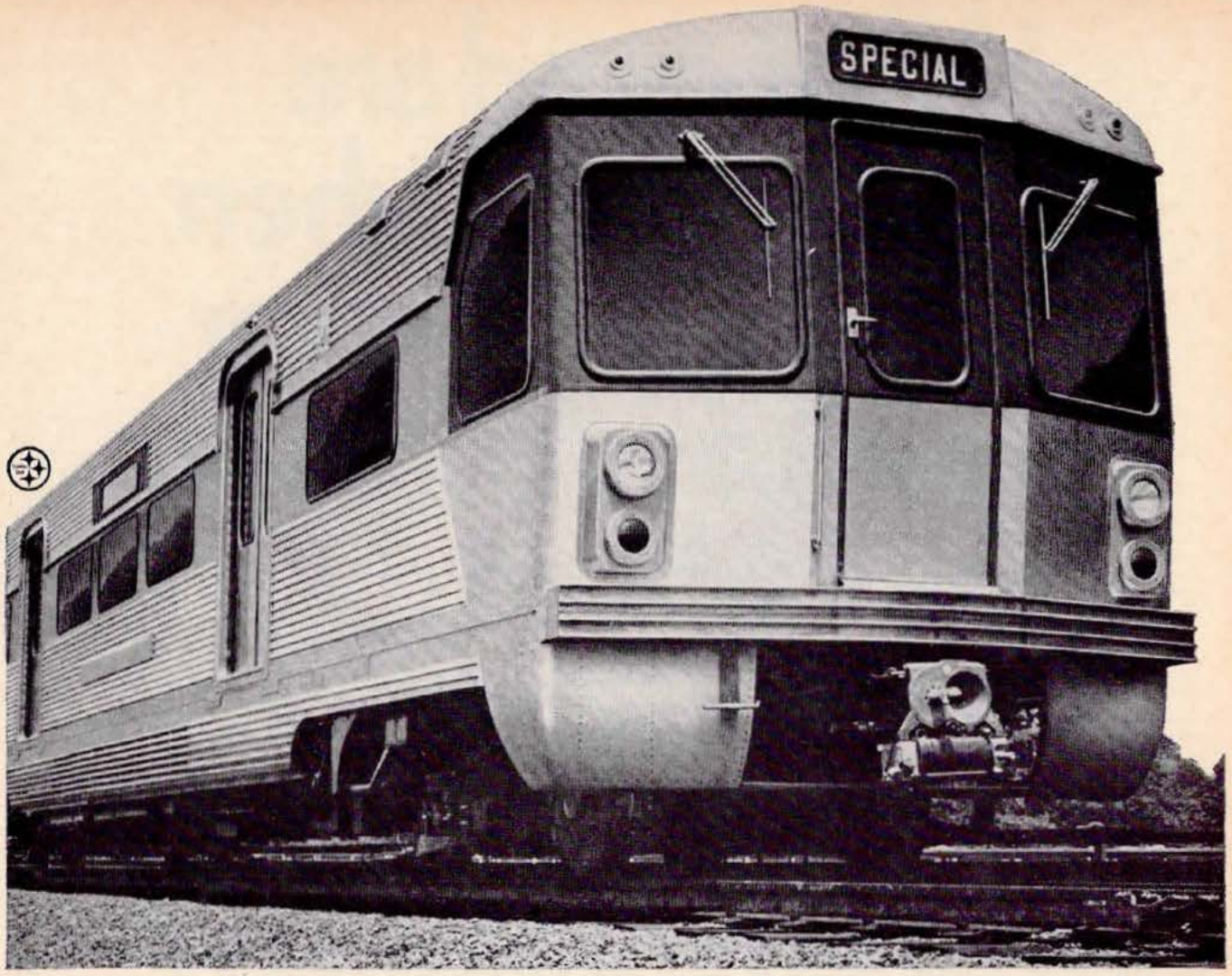
The AAR has compiled some official safety statistics, says Schultz, "to make sure pertinent facts are known and understood." The Association questions, for example, "whether it's fair—or even accurate—to compare all so-called railroad fatalities with the number of persons killed in airline crashes. Not when the often-used railroad figure includes grade crossing accidents that constitute about 65% of the annual total. And not when this same figure may include persons killed while walking along railroad tracks or hopping freight trains."

THE BEST YEAR SINCE 1888

In seven of the last 10 years, the AAR compilation points out, the safest way to travel in the United States was by train. Americans traveling in passenger trains last year were 24 times as safe as they were in automobiles, three times as safe as in airplanes and more than twice as safe as they were in buses. In 1968, all fatalities involving the nation's railroads, excluding deaths at grade crossings, totaled 812. That was fewer than in any year since 1888, when record keeping started. The largest number killed, 568, were classified, in official reporting terms, as "trespassers."

BUT THERE'S NO TIME FOR COMPLACENCY

Even a partial listing of railroad efforts to further improve the industry's safety record makes impressive reading. Here are some of them: Railroads are spending almost $2 billion this year to improve and maintain roadway facilities and structures; they are working with the Secretary of Transportation's Task Force on legislation that would call for continuing cooperative efforts, coupled with new regulations; they are pursuing new industry-wide safety programs through the Safety Division created this year within the AAR; and, by no means last as a safety factor, railroads are making increased use of such technological and mechanical advances as roller bearings, centralized traffic control, electronic detector cars for spotting rail defects, and radio communications.



The future for commuters is lighter...brighter...faster.

...and here today! New lightweight nickel stainless steel cars for high-speed commuter service are now being delivered to major transportation systems. This car, one of 75 built by The Budd Company for the Delaware River Port Authority, will serve the Philadelphia and southern New Jersey area as a combination subway-commuter car. Stainless steel's high strength-to-weight ratio makes possible car structures as light as those of aluminum... but with these extra advantages:

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Circle 6 on coupon page 31

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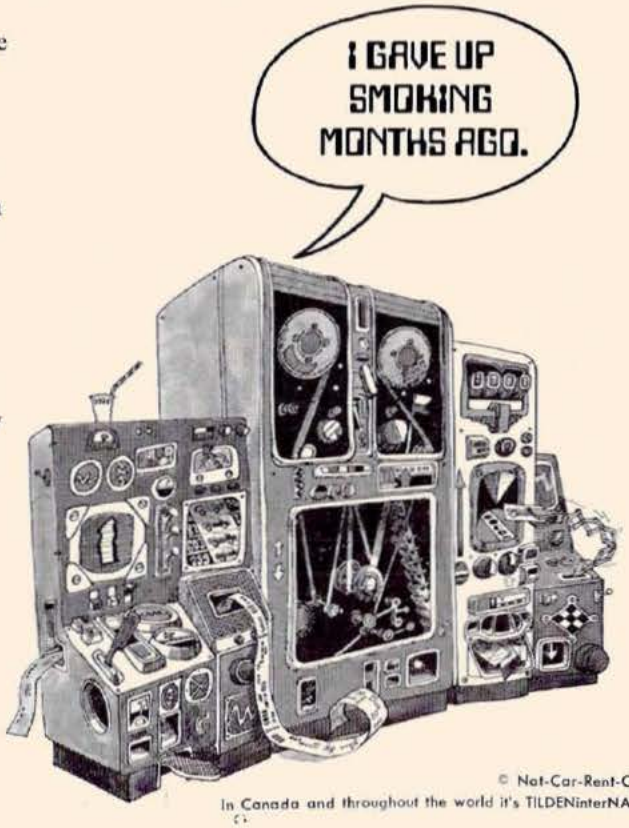

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RAILWAY AGE
THE TRANSPORTATION WEEKLY
September 1, 1969

WEEK AT A GLANCE

Oil exploration set for UP lands in three states

Union Pacific's Natural Resources Division and Pan American Petroleum Corp. have announced an oil and gas exploration program covering 7 million acres of Rocky Mountain lands on which UP owns the mineral rights. Pan Am, a wholly-owned subsidiary of Standard Oil Co. (Indiana), will acquire oil and gas exploration and developments rights on UP's holdings in Colorado, Wyoming and Utah which are not now committed to other oil companies or retained by UP under the agreement. While Pan Am will acquire exploration rights on virtually all of UP's holdings, about 25% of the development rights will be retained by Union Pacific, along with royalties on production. The agreement provides that Pan Am will give UP an annual cash bonus for the first three years amounting to a total of $9 million and "will spend or cause to be spent" a minimum of $15 million on its exploration task over this period. The program will include seismic surveys and geological analyses.

St. Louis Car submits low bids for IC cars

St. Louis Car made a virtual clean sweep of it at last Wednesday's bid-opening in Harvey, Ill., for 120 Illinois Central double-deck commuter cars. The carbuilder submitted the apparent low bids on cars of LAHT steel ($37.3 million) as well as of stainless steel construction ($38.6 million). Other bidders were Pullman-Standard, Budd and Hawker-Siddeley Canada Ltd. Chicago South Suburban Mass Transit District, which will be the owner of the cars, plans to review all the bid proposals and announce the award of the contract as quickly as possible, according to a spokesman for the District.

Hurricane Camille adds more rail victims in the East

Railroad men who thought Hurricane Camille had done her worst in Louisiana (RA, Aug. 25, p. 11) got the surprise of their lives when Camille reached the Virginia hills. There was little wind left but lots of rain—10 inches in as many hours. Result: flash floods and, for Southern, Norfolk & Western and C&O/B&O, disrupted service. None of the railroads had dollar estimates of the damage last week, although they agreed it would be in the millions. It was not expected that service would return to pre-Camille levels before the end of September.

Service on Southern's main line south from Charlottesville, Va., stopped when the Tye River bridge went out north of Lynchburg, with four strings of welded rail left dangling over the river. Southern reported nine track washouts. N&W's single-track Shenandoah Division line north from Roanoke had washouts from the Maury River varying from 500 to 150 feet. C&O/B&O lost 70% of the Rivanna Division line west from Richmond.

MEANWHILE, BACK IN LOUISIANA: L&N's "hurricane-proof" bridge at Bay St. Louis proved to be just that, but rail, ties and ballast vanished.

GUS WELTY

LINES ON LABOR

THERE IS A RUMOR that old scripts from "The Perils of Pauline" are being used in writing of the current history of the Long Island Rail Road. It isn't true. Pauline always came out OK. But for the LIRR, the script is incomplete.

IT WOULD BE GREAT if the LIRR situation were either all black or all white. Judgments could be made—judgments, for instance, as to whether the travails of government ownership have proved the superiority of private ownership; or judgments as to how a breakdown in management/labor relations can damage an enterprise.

THESE JUDGMENTS CAN'T BE MADE, at least not yet. LIRR's operators, prodded by Gov. Nelson Rockefeller, may in fact be able to turn the railroad around and make it something other than what it is (and irate commuters are free to add their own observations here). Perhaps the biggest single contribution to LIRR's future would be a management/labor agreement in which each side would pledge not to disagree so often and so ferociously.

NEW YORKERS seem to consider LIRR a crying shame (but, as somebody said, that's not really news). The real shame today is that the columns of bad publicity given the railroad and its unions tend to spread an impression that LIRR is "the railroads" and LIRR's unions are "rail labor." In both cases, the impression is worng.

LONG ISLAND MUST DEAL with 18 locals, representing 15 unions. This multiplicity of organizations, coupled with the compact nature of the property, coupled with government ownership and political involvement, coupled with the militancy of labor generally in the New York metropolitan area, produces a situation that often seems to border on chaos.

ONE WONDERS, occasionally, what management-oriented thoughts must run through the minds of AAR President Tom Goodfellow and Public Relations VP Jim Schultz, who held the same respective jobs on LIRR before moving to Washington in 1967. One also wonders—and this wonder may be more to the point—what labor/oriented thoughts must run through the mind of a man such as United Transportation Union President Charles Luna. His union has made a commitment of sorts to the betterment of urban mass transportation. Yet UTU has been one of the sharper thorns jabbing into the tender skin of LIRR. And what's next for LIRR? It'll be in the morning papers, no doubt—every morning.

PAT outlines "Early Action" plan for Pittsburgh

Detailed plans of the Pittsburgh Port Authority's Early Action rapid transit system have been presented to Allegheny County commissioners. Work on the system, said William L. Henry, Port Authority Transit chairman, could begin within months. It could, he added, be in full operation in 1974.

Henry said that for an investment of $38.1 million by the county, Allegheny residents would get a $228.7-million rapid transit network of nearly 30 miles. Federal and state governments are expected to furnish the rest of the funds.

PAT, said Henry, has examined alternative transportation modes and is "firmly convinced our program offers the most creative, economical rapid transit system that can be built and operated in Allegheny County."

Westinghouse Air Brake recently proposed a $114-million rapid transit system for Pittsburgh that would utilize existing rights of way. It was presented to PAT directors as an alternative to Westinghouse Electric's proposed Skybus system (RA, July 21, p.14).

The PAT plan calls for constructing two PATway systems totaling 18.4 miles and for building an 11-mile Transit Expressway Revenue Line. PATways are paved rights of way for bus use exclusively. One would travel through Shadyside, East Liberty, Homewood, Wilkinsburg and terminate at the Penn-Lincoln Parkway at Edgewood. Another would serve various South Hills communities to Library and Bethel Park.

Transit Expressway would use lightweight, automated, rubber-tired vehicles. The line would originate in downtown Pittsburgh and travel through Beechview, Dormont, Mount Lebanon, Castle Shannon, Bethel Park and terminate adjacent to South Hills Village Shopping Center in Upper St. Clair.

"This system," John Dameron, PAT executive director, told the commissioners, "will be built underground, at grade and above ground as required by terrain. It is safe. Locked to the roadway, it cannot be derailed. It is noiseless."

The financing is available now, Henry said. An application for $8.7 million representing two-thirds of the $13-million estimated cost of final engineering designs has been submitted by PAT to the Federal Department of Transportation. He urged the commissioners to commit $4.3 million as the county's one-third share of the engineering project budget.

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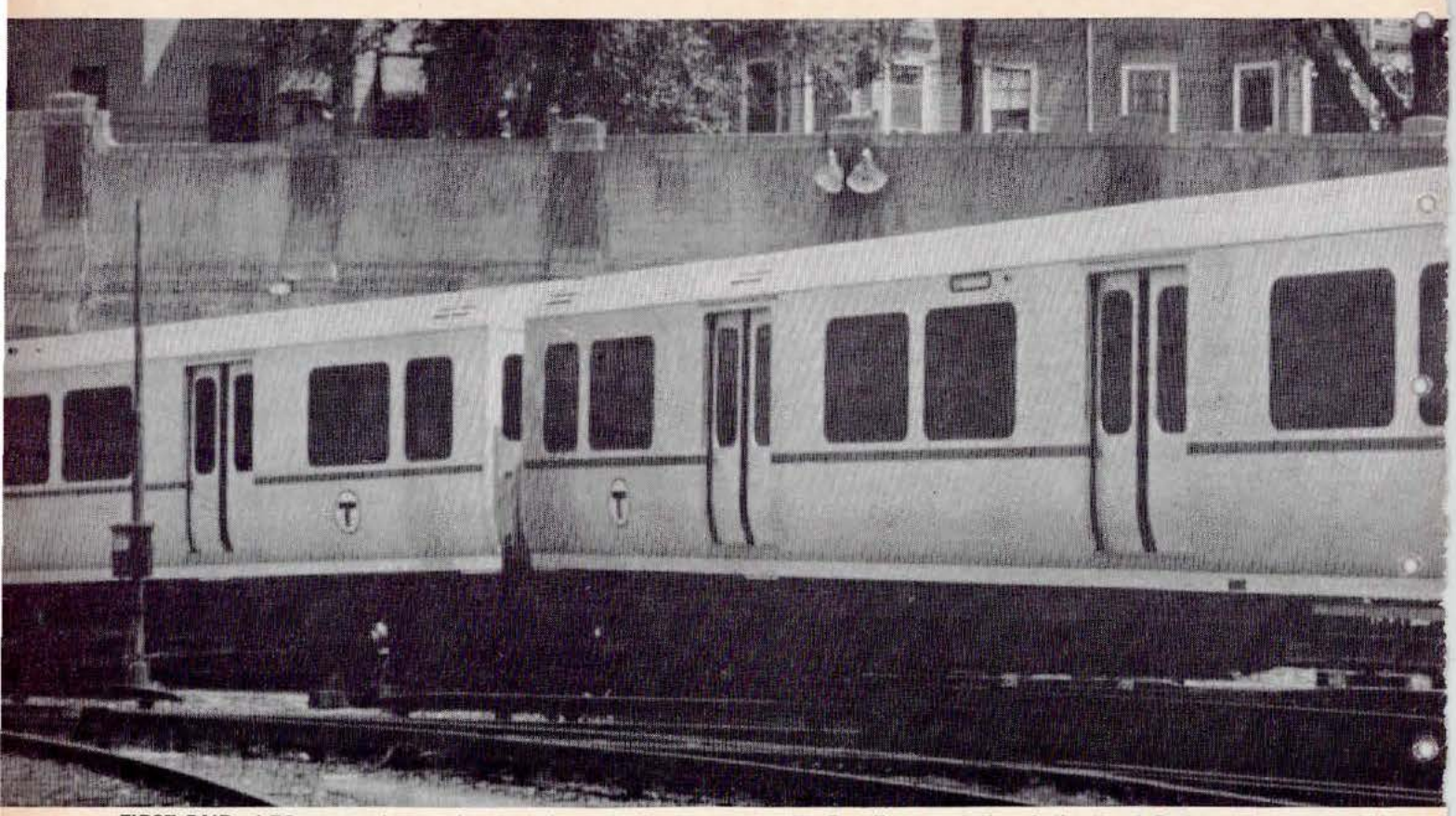
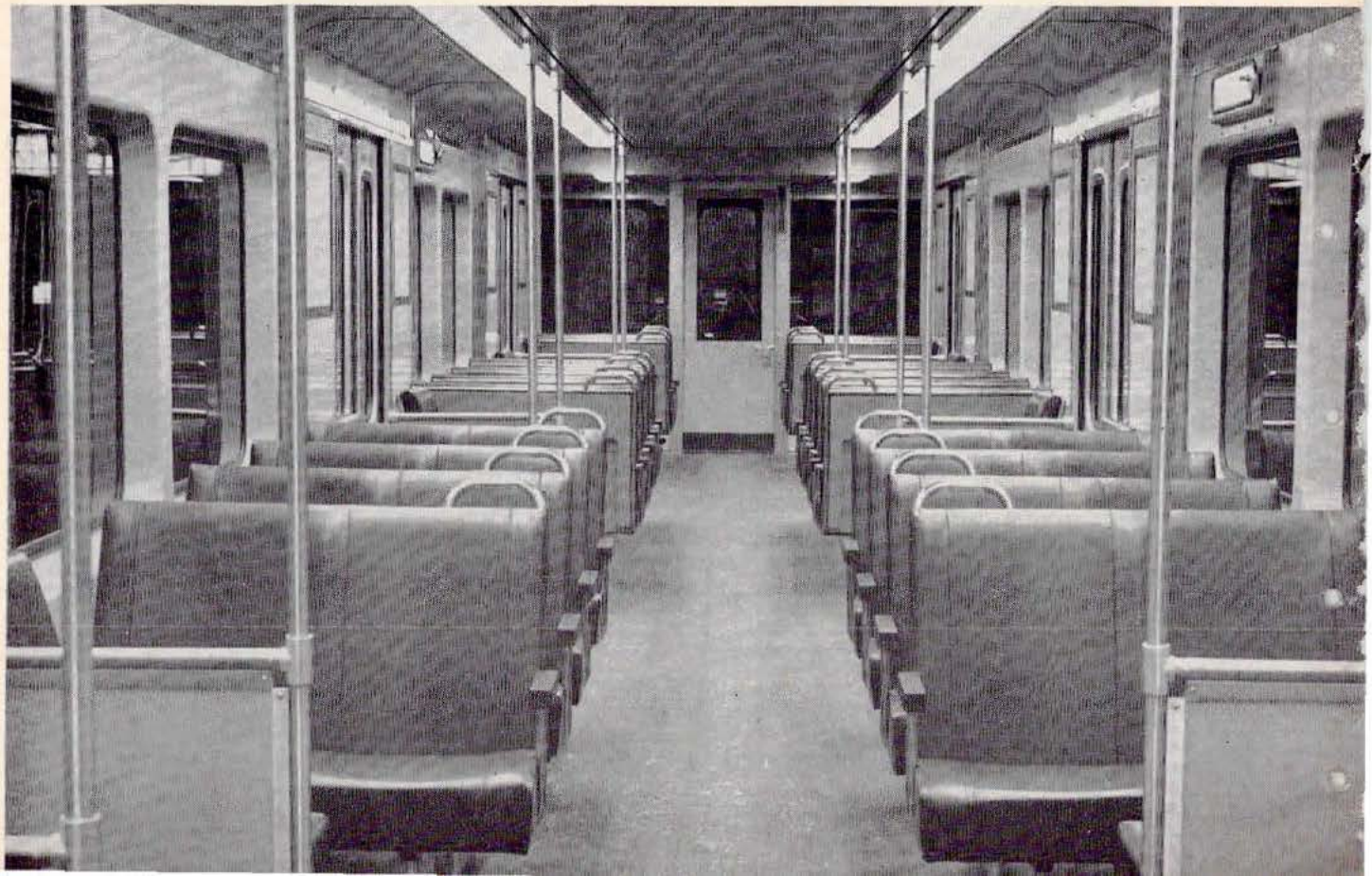
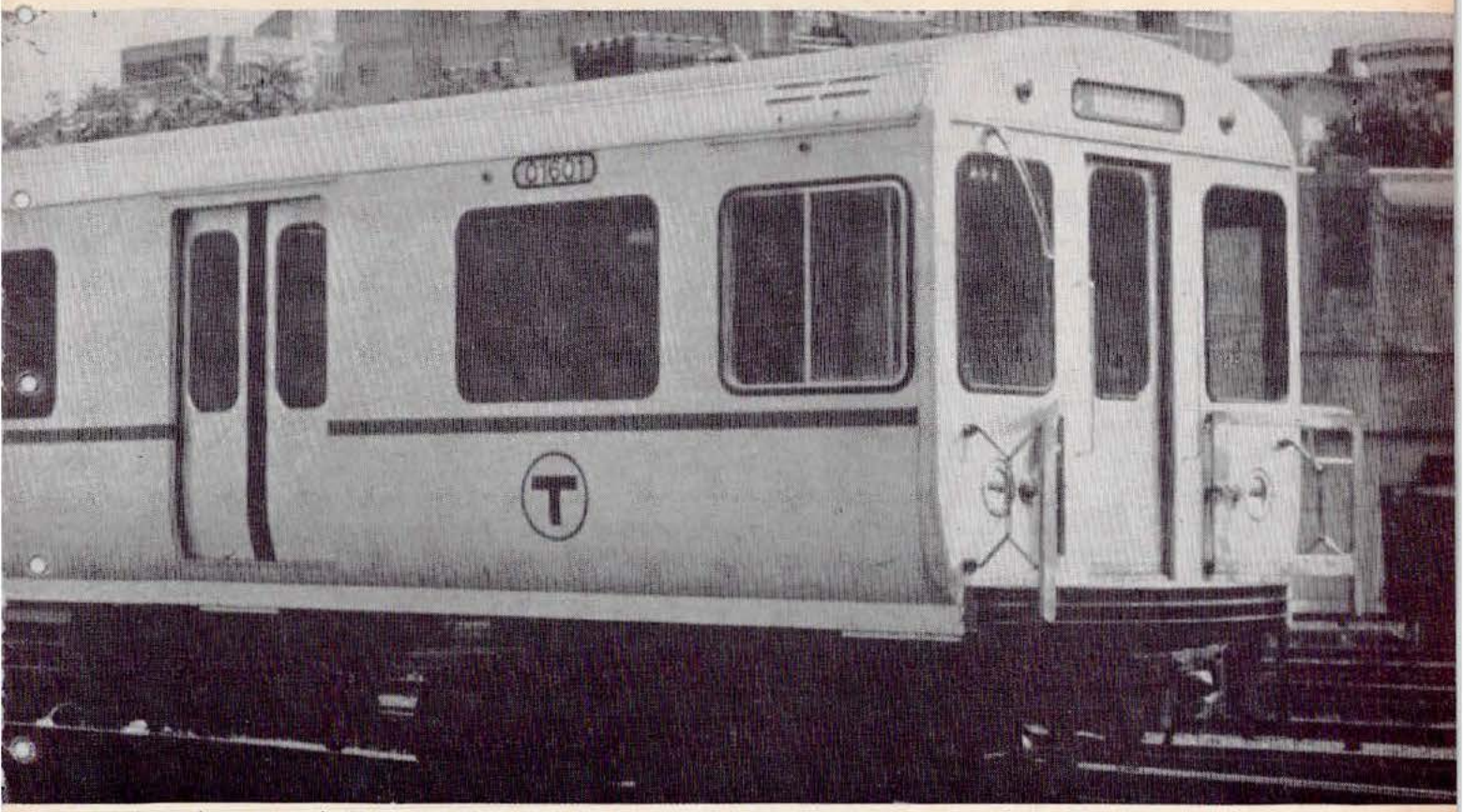


FIRST PAIR of 76 new rapid transit cars being built for Massachusetts Bay Transportation Authority at Pullman-Standard's Chicago

Boston is getting its first air-

FEATURING TRANSVERSE SEATING for the most part, air-conditioned cars will have electric heating for the cold months.





plant are shown here on car-builder's test track. Cars will be longest in transit service anywhere in the U.S.

conditioned transit cars

First group of new cars is to be delivered this month. Each car will seat 64 persons, with standing room for 175. Safety and comfort have been given top priority in the new equipment.

Tell a Bostonian to "cool it," and probably the last place he'd head for would be the local transit system. No more, though; things are changing on the Massachusetts Bay Transportation Authority system. Air-conditioning is coming for the first time—in a $13-million fleet of 76 new, sleek, clean-lined, brushed-aluminum transit cars being delivered by Pullman-Standard.

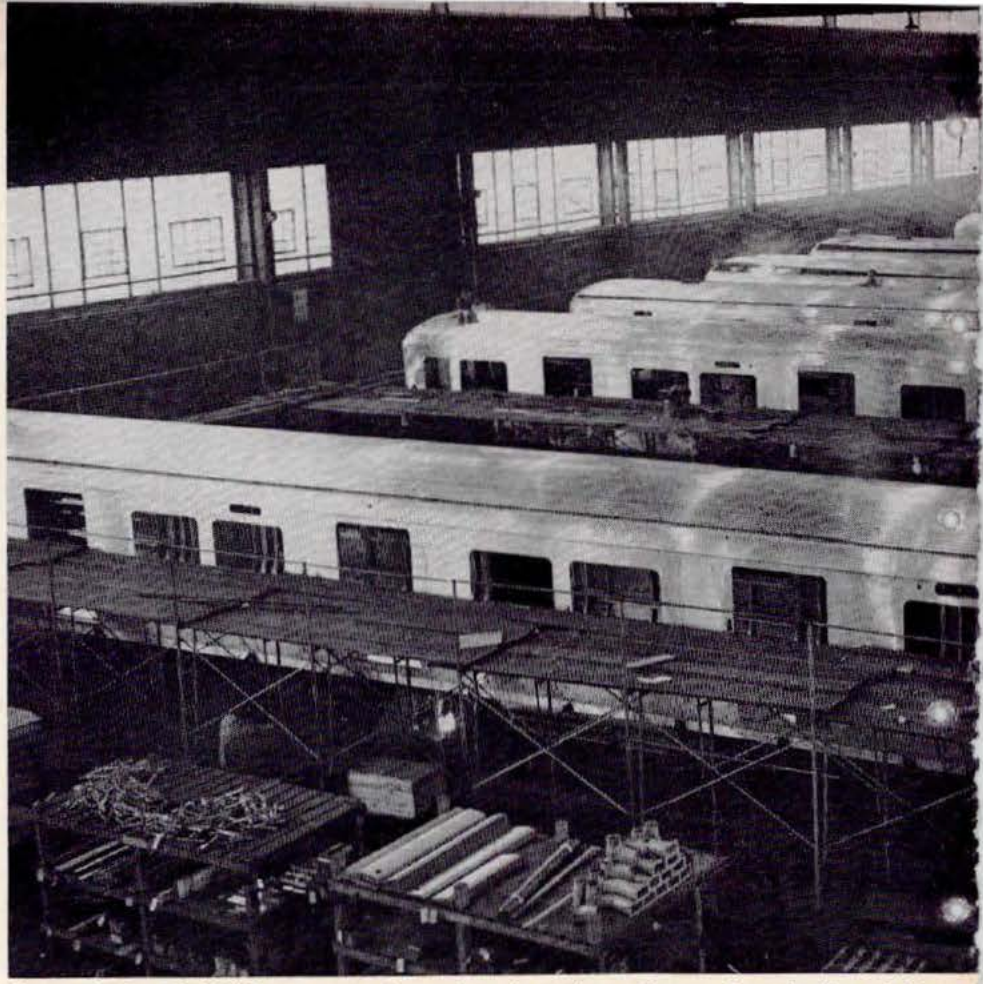
That's not all, either. Transit riders on the system's planned new 10-mile South Shore extension to Braintree, where the new cars will eventually be operating, are in for a host of new and pleasant surprises. They, as well as all residents of Boston and the 78 densely-populated communities adjoining it, will have an opportunity to see their new cars in action for the first time this month. On Sept. 25, MBTA plans to introduce the first group of the new cars to the public.

● **Revenue service soon.** Federal and state officials, as well as representatives of the 79 political jurisdictions served by the MBTA, are expected to participate this month in the initial run of the first cars to arrive on the scene. MBTA officials plan to run the new cars to Dorchester on the existing Cambridge-Dorchester line and then back to Cambridge where they will be on display, shortly thereafter, they'll be placed in revenue service.

The new fleet of cars is scheduled to operate on the new MBTA extension leading south to Braintree. They may have to wait until mid-1970 to do so. The extension, which was supposed to be open in time to accept the new cars, has been plagued with a number of different labor and legal problems. They have combined to put everything behind schedule. Therefore, for the time being, the new cars will be operated on the Cambridge-Dorchester line (Red Line), where the system's heretofore latest model cars have been in service.

● **Top speed: 70 mph.** The new cars are being powered by four Westinghouse Tracpak traction motors, each rated at 100 hp, which will operate two in series on 600 volts DC. Each of the high performance motors has a parallel double reduction gear unit. The cars will be capable of attaining a top speed of 70 mph. Maximum acceleration rate is 2.5 miles per hour per second.

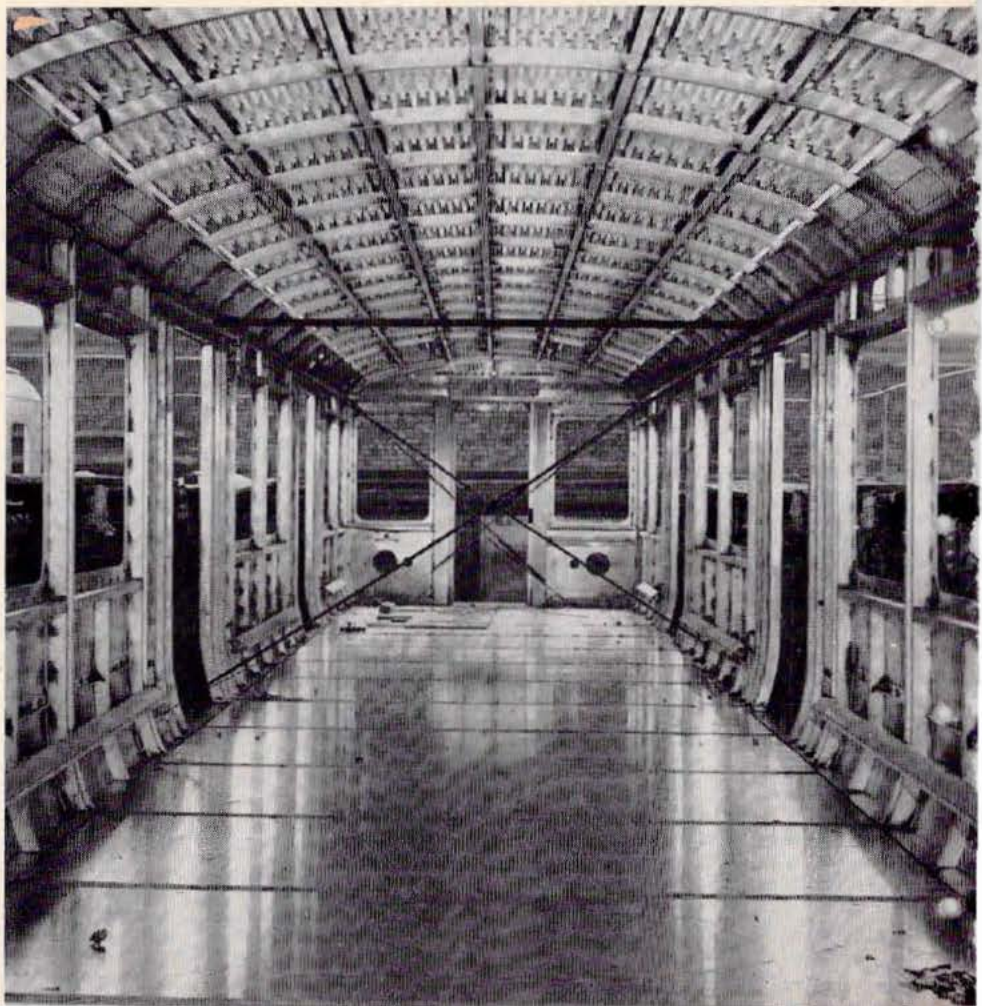
Maximum dynamic braking rate is equivalent to 1.3 mi/hr/sec. at 70 mph tapered uniformly to 2.75 mi/hr/sec. at 50 mph. Dynamic braking will be



Some of the 76 MBTA cars are shown here in various stages of production at the

NEW MBTA TRANSIT CARS ARE ROLLING

Aluminum is being used extensively, but underframe end units are of alloy steel.



effective down to 15 mph, at which point the air brakes will be applied automatically to take over and complete the stop.

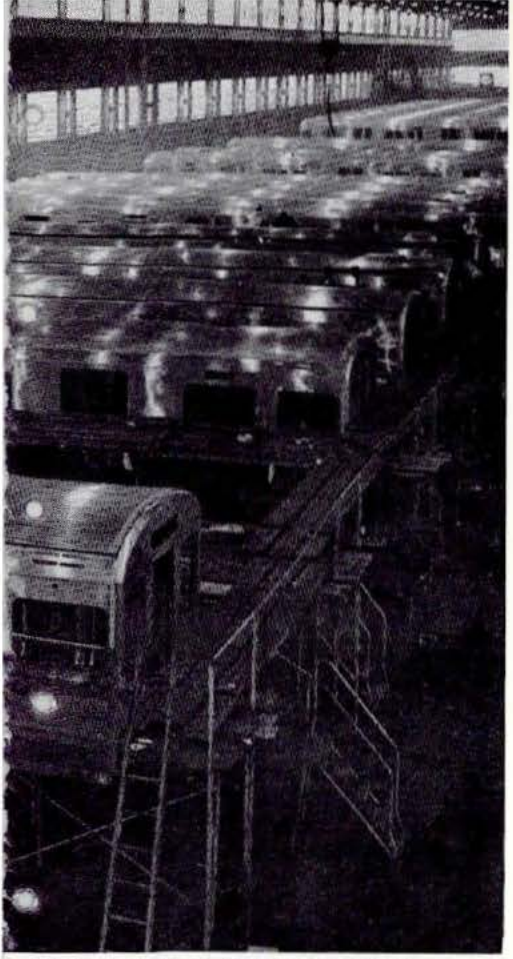
● **Flair and comfort.** From the outset, MBTA riders are going to see that the new cars are unlike anything that they have ever had before. That includes the 92 new cars added to the over-all fleet as recently as 1963. The new cars, like the 1963 models, are designed to handle a large volume of passengers.

Aside from the air-conditioning—12 tons of it in each car—riders are certain to be impressed with the transverse seating arrangement, and with the plush, upholstered black vinyl seats. The 1963 model cars had no air-conditioning. They had longitudinal fiber glass seats on each side of the car. The earlier cars had a seating capacity of 57, and could accommodate as many as 266 standees. By contrast, the new cars will seat a maximum of 64, with space for 175 standees. Obviously, the emphasis in the new cars is on passenger comfort, without a tremendous sacrifice of passenger volume.

The new cars have fluorescent lighting, compared with the incandescent lighting in the 1963 model cars. Another difference is the interior color scheme. The earlier cars' interiors had an array of colors—blue fantasy, coral, beige, blue echo and blue-gray—to go along with the stainless steel trim. The new cars represent a complete flip-flop so far as colors go. Different tones of gray are used in the ceiling and wall panels, and like the seats, the floor covering is black.

● **Lots of aluminum.** MBTA has made quite a departure in the selection of material and styling of the new car bodies. Cor-ten steel was used in the 92 cars delivered in 1963. In the new cars, aluminum is being used almost exclusively in the car bodies, first time for the MBTA. Brushed aluminum is being used on the sides and ends. This represents the first time P-S has ever used that type of finish. It is also a first for any U.S. transit cars.

Less readily noticeable by the Boston riders will be the unusual roofs on the cars. The corrugated aluminum sheets being riveted to form the roof are the



Chicago plant of Pullman-Standard.

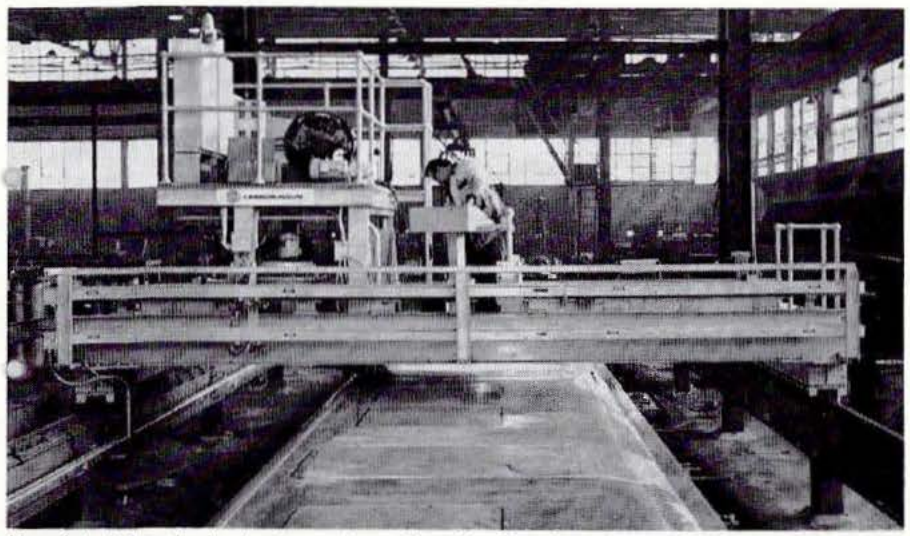
longest ever made—66 ft., 4 in.—reports Alcoa, their manufacturer.

Of the 76 cars on order, 26 are A units, 26 are B units, and the remaining 24 are single-car units. A and B units are designed and equipped to operate as married pairs. The basic difference between the A and B units is in the undercar area. The A units carry the pair's battery. The B unit has the air compressor for the two cars. The single-unit cars, have all essential undercar equipment and, therefore, can operate singly with no dependence on another car.

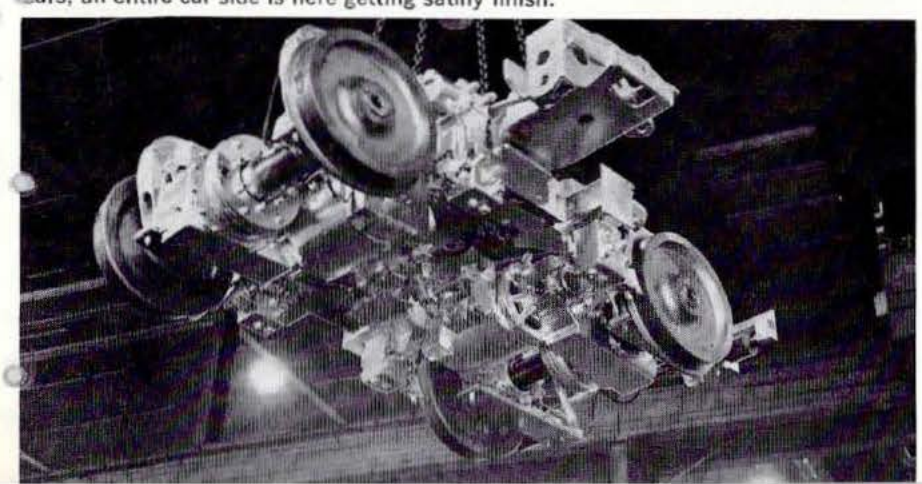
● **New cars weigh less.** Despite all the added sophistication and passenger comfort designed into the new cars, they weigh considerably less than the 1963 cars. The brushed aluminum body construction accounts for most of this weight saving. To give the brushed, satiny finish to the cars, P-S installed a special, automatically-indexed grinding machine in its passenger and transit car plant in Chicago, where the MBTA cars are being built. This combination jig and belt sander fixture can grind smooth a 6-in.-wide path on a car side as long as 85 ft. and automatically adjusts itself for a return pass adjacent to the first. The fixture keeps on doing this until the entire side is brushed. It is flexible enough to produce a thorough job even on a contoured surface, and can do car ends as well as sides.

The new machine, developed jointly by Carborundum and Pullman-Standard, can also produce a brushed finish

OFF THE PULLMAN PRODUCTION LINE AT A GREAT RATE



Unpainted brushed aluminum is getting its first transit application on the MBTA cars; an entire car side is here getting satiny finish.



Touring the production line are Frank Gallagher (Massachusetts Bay Transportation Authority inspector), E. H. Weidman (works manager, Pullman Car Works), and Leo J. Cusick (MBTA general manager).

The new MBTA cars are being equipped with General Steel Industries' fully equalized cast steel trucks.

FRANK MALONE

WATCHING WASHINGTON

BY LAW, THE NATIONAL TRANSPORTATION SAFETY BOARD *must* investigate all civil aviation accidents. By law, the Board *can* investigate any surface accident it wants to. To handle air probes, NTSB has 101 men. To handle surface probes, NTSB has 12 men. However, neither the statutory assignment nor the manpower balance have dampened the Board's interest in surface incidents. And lately, most of the surface cases have been rail cases.

NOR HAS THE INTEREST WEAKENED because the Board may produce a suggestion that seems a little hard to believe. Earlier this year, NTSB said locomotives should have front-end cushions to cut the impact of grade-crossing crashes. The "pillow" plan drew few cheers. It was not structurally sound, rail men said. However, you might admit that even a far-fetched idea makes you think about the basic problem. And there are indications that future Board suggestions will be more realistic.

PENN CENTRAL IS BEARING THE BRUNT of NTSB surface selectivity. NTSB chose the June 28 passenger derailment on PC high-speed track near Glenn Dale, Md., in which one man was killed. From the hearings (RA, Aug. 25, p. 12), you get the impression PC welded-rail practices are in for a cold appraisal. And the hearing-room lights were hardly dim before NTSB sent probers to Darien, Conn., scene of a multi-fatality, head-on commuter collision on a former New Haven line operated by PC. In addition, the only 1968 Board report on a surface case accused PC of faulty track maintenance. Subject was the Dunreith, Ind., hazardous-traffic wreck.

IT JUST HAPPENS, a Board spokesman says, that the PC incidents fit the type the Board thinks it must probe—because of overtones for the entire industry. The Maryland investigation might have been left to FRA men, if the derailment had been off the high-speed route. But the first accident on rebuilt Corridor track raised doubts about Metroliner safety and about use of welded rail for fast passenger operations. And the Connecticut collison brings up the "fundamental matter of dispatching and signaling," the NTSB spokesman says. Then, the Indiana incident opened the hazardous-materials syndrome. In this same area, a Board report is due soon on the 1968 Laurel, Miss., derailment that threatened an entire town. Here, Southern was involved, and the concern is wheel construction.

on stainless steel, reports Ed Weidman, P-S plant manager. It could also be used to rough up a metal side to assure good paint adherence.

● **Longest U.S. transit cars.** While in many respects the new cars are in sharp contrast with the 1963 models, there is one important area where they are in complete harmony. That's length. The new cars, as well as their most immediate predecessors, are 69½ ft. long over anti-climbers. The great length accounts for their high passenger capacity. They are the longest urban transit cars operating in the U.S. today, a feature made possible by the simple geometry of the MBTA system. Free of severe curves and trackside obstructions, the system is ideally suited for extra-long car lengths.

Many new features in the cars MBTA riders will not be aware of until the cars are in regular revenue service. There are things like sound-proofing, which is being used liberally throughout each car to make riding more comfortable, perhaps more quiet than any in operation anywhere today.

● **High safety factor.** Safety, as well as comfort, has been given top priority status in the new MBTA cars. The cars are equipped with automatic speed control, which picks up and relays car control signals from track circuits. New on the MBTA, this control system will permit a central controller to override the motorman if he does not take corrective action to bring his train speed to within the specified limit. The train will go into an emergency stop if action is not taken within a specified time. Track crews, too, can exert control over train speeds for extra protection in areas where they are working.

Also in the realm of safety, the new cars have two-way wayside radio communication. With this system, the conductor and motorman can communicate with each other, they can communicate with the dispatcher or, by throwing a switch, the dispatcher can communicate directly with the passengers. The radio system can accept command signals from the control tower to override the motorman's actions.

For safety purposes, the door mechanisms (three per car side) are interlocked with the motorman's controls. If the doors are not closed, the train can't operate. If train speed is over 3 mph, the doors cannot be opened as the train approaches a station.

The cars are equipped with a special snow brake, which puts a slight shoe pressure on the wheels to melt snow or accumulated ice. Coupling, too, should be much easier and safer for MBTA personnel. Using switches in his control console, the motorman can couple or uncouple automatically. ■

TRANSIT ROUNDUP

DETROIT: Everyone, it seems, has a rapid transit proposal for this city, which has been talking about the subject for 50 years. The most ambitious plan has come out of the Detroit Regional Transportation and Land Use Study (TALUS). With a 1990 proposed completion date, TALUS blueprints a $3-billion buildup of transportation facilities including a $1.1-billion 81-mile rail rapid transit system and a $2-billion expansion of freeways and highways.

But the head of Detroit's bus system, Robert E. Toohey, thinks there's been enough of this kind of talk and he wants some action. Last week he proposed that the city seek federal aid to build $60- to $80-million, 4½-mile subway link between downtown Detroit and the New Center area, without further delay. As for equipment, he suggested that Montreal's Expo 67 cars could be obtained for about $1.25 million, one-fourth their original cost.

Not happy with Toohey's proposal was Dr. Wilbur Thompson, chairman of the South Eastern Michigan Transportation Authority, who said nothing should be done until SEMTA completes its own proposal for a regional transit system, sometime next summer.

WASHINGTON: While the Washington Metropolitan Area Transit Authority waits for Congress to get around to appropriating the $18.7 million it needs to start building its Metro system, the final design work is drawing to a close. The single largest design contract to date has been awarded to Dalton-Dalton-Little of Cleveland. This $1,358,000 contract marks the first phase of the final design work in the Maryland suburbs. The two-year contract provides for track alignment, stations, parking and related facilities over a six-mile portion of the system. Most of the trackage will be above ground; all of it will be within the B&O right of way. (Dalton-Dalton-Little was responsible for the design of the six-mile rapid transit extension from downtown Cleveland to Hopkins Airport—the first such line in this country.)

NEW YORK: Governor Nelson Rockefeller's aides have been trying to put an escape clause into his recent statement that by Oct. 7 of this year the Long Island Rail Road will be providing the nation's finest railroad commuter service. They have said that what the Governor really meant was that the LIRR would be "on the way" to becoming the finest by that date. But the Governor is sticking with his original statement. "I have never qualified my position," he declared last week. "I stand on my position and on Oct. 7 you will get the answer." Meanwhile, LIRR train cancellations have geen getting fewer but the equipment shortage remains critical despite stepped-up work at the road's Dunton shops.

SAN FRANCISCO: The first test trains won't be operating over the Bay Area Rapid Transit system for another year, but programming of BART's automatic train control setup is already under way. Heart of the system is a control room and computer center at BART headquarters in Oakland. Dominant in the control center is a system-wide display board—eight feet high by 88 feet long—covering BART's 75-mile system and 33 stations. From this board (with its 35,000 tiny light bulbs and 21 miles of wiring), BART operations will be automatically controlled. In full system operation, that means control of more than 100 trains, which will be accelerating to 80 mph and operating on headways of as little as 90 seconds.

From the board room, BART will also be able to get continuous monitoring of the condition of the power network, ventilating system and other critical system equipment. Emergency power sources are being provided to keep the system operating (for up to two hours) in the event of power failure Duplicate computer systems have also been installed. Both the automatic train control system and BART's communications system are being supplied by Westinghouse Electric under a $26-million contract.

CHICAGO: Harold A. Lenske, Chicago & North Western's director of commuter and passenger services, is a worried man. C&NW riders (like many Americans) are concerned about physical fitness, he says, "and our trains are so comfortable that I'm afraid they may be contributing to the out-of-shape condition of some of our commuters." Lenske concedes that it may be a bit too much to expect commuters to jog to the station, with wildly-swinging attache cases and umbrellas. But bicycling? That's something else. And so C&NW is installing lockable 20-stall bike racks at each of 20 suburban stations. For some commuters, the height of multi-modality may not be reached: Bike to the station, C&NW to the city, and maybe a boat on the Chicago River to the office. And what's next? Well, says Lenske, "if our people were roller-skating to our stations, you can rest assured we would be installing roller-skate racks for them —if there are such things."

DEPARTMENT OF TRANSPORTATION: Two research contracts, totaling $224,750 aimed at improving underground tunneling for future transportation systems, are being jointly funded by the Department's Federal Railroad and Urban Mass Transportation Administrations. The first contract — awarded to Harza Engineering Co. of Chicago — will concentrate on the development of a computer program for estimating the cost of tunneling through hardrock. The second contract—awarded to Holmes and Narver, Inc. of Los Angeles — will focus on improving methods of transporting workers and equipment in and out of the tunnel site, and carrying the excavated material to the outside.

LONDON: London Transport has renewed its appeal to the British Ministry of Transport for authorization of a project to extend its Piccadilly Underground line from Hounslow West to Heathrow Airport. Stressing the urgent need for a rail link to one of the world's busiest airports, London Transport estimates that the proposed extension would cost only about $34 million, less than any other comparable proposal. Completion date would be 1973. London Transport is convinced that the airport connection would not only pay its way, but would return a handsome profit.

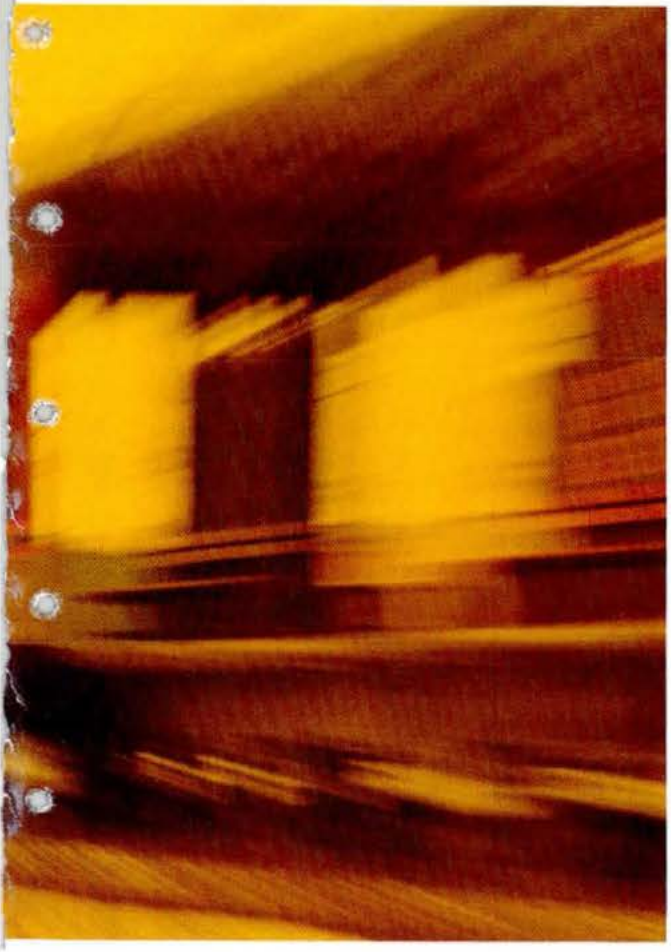
HELSINKI: Recent action taken by the Helsinki, Finland, City Council is indicative of the pace which non-U.S. cities are setting in coping with their urban transportation problems (reports Railway Age's companion publication, International Railway Journal). Finland's capital city will start in a small way, with a 7-mile subway due to be completed in 1977. One third of this line will be tunneled through solid rock. First-phase cost is estimated at around $80 million. Ultimately, the system will be extended to close to 25.

The urgent nature of the Helsinki transit problem is pointed up by recent predictions of a population explosion in the offing. Present population of around 550,000 will swell to an estimated 1,000,000 by the year 2000, say city planners.

The number of private autos has soared in recent years and these are now jamming city streets at peak hours.

We've got the cars that make transit systems rapid.

And we've got the systems, too.



There's more to building a transit car than designing in carbon steel, stainless or aluminum. And more than engineering it to basic specifications.

It takes an understanding of systems.

With its affiliate divisions, Pullman-Standard engineers can participate in every aspect of rapid transit systems development, including traffic studies, interface analysis, route planning, civil engineering, operations, maintenance, and even automation.

This experience results in the finest cars for existing or planned systems. It's why you'll find Pullman-Standard cars on the country's most successful systems, from commuter runs to subway lines to airport service.

Before you settle on a car, make sure it's right for your service. Before you settle on a system, see us.

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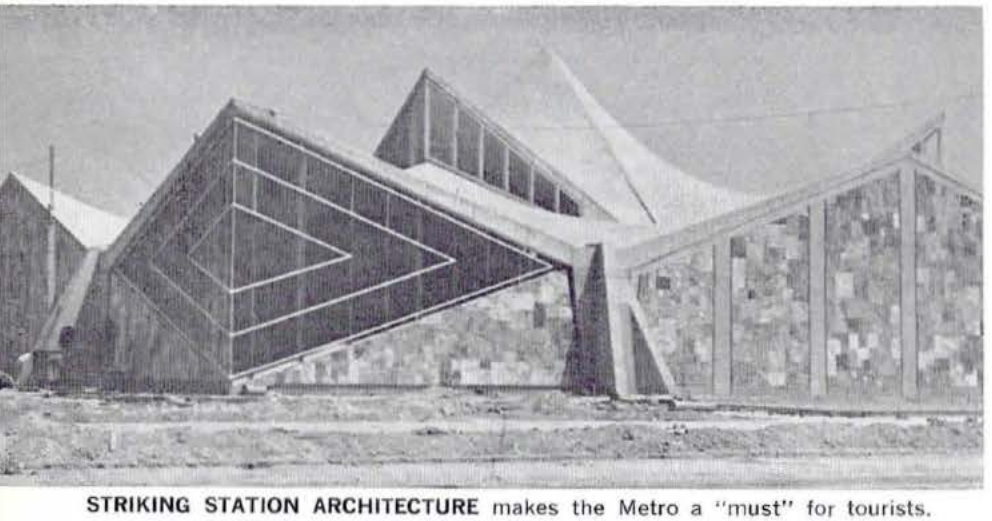
A Division of Pullman Incorporated

RUBBER-TIRED CARS for new Metro came from France, which financed project.

Operation headstart, Mexico City style

Twenty-one months after construction began, one-third of the world's newest subway system is ready to open for business.



STRIKING STATION ARCHITECTURE makes the Metro a "must" for tourists.

While U.S. cities continue to talk, talk, talk about rail rapid transit, their "underdeveloped" neighbor south of the border has stolen a march. Mexico City stopped talking 21 months ago and got down to the serious business of digging. Last week, Phase 1 of the Mexico City Metro was completed and ready for the paying customers.

The first eight-mile section of Latin America's second subway system (Buenos Aires boasts the first) runs from Chapultepec Park to Mexico City's International Airport. By November 1970, the entire 22-mile system is to be in operation, handling an estimated 1.8 million passengers during each 20-hour operating day.

● **High and handsome.** Proclaimed as the world's highest subway (Mexico City is 7,350 feet above sea level), the $320-million system was famous even before its official opening for the striking architecture of its stations. Interior decoration, which includes modern murals and sculpture, was aided by the discovery of literally tons of ancient Aztec artifacts during excavation. Pino Suarez station, in the heart of the downtown area, is built around an Aztec pyramid that was uncovered during excavation.

● **Rubber-tired trains.** Cars for the system are being supplied from France, which financed two-thirds of the total cost of the project. As in Montreal and parts of the Paris Metro, Mexico City's cars have rubber tires, although in other respects they are more austere.

The entire operation is controlled by a computerized, electronic system that occupies most of a downtown six-story building. Electronically-coded tickets activate turnstiles. The price of a one-way ticket is one peso, or about eight cents U.S.

Construction of the Metro has been anything but a "manana" project. First ground was broken less than two years ago. The cut-and-cover method was used. An earthquake rocked the city last fall, but 10,000 subway workers labored on. There was also the problem of spongy subsoil. This was solved by the installation of electrically induced magnetic fields to shift water deposits from one area to another.

● **Good—but not good enough.** While the 22-mile Metro now being rushed to completion will be a major assault on one of the world's worst traffic-congestion problems, Mexican transport experts don't view it as a final solution. By 1980, Mexico City's population will have soared to 11.6 million. By then, the experts figure, an additional two subway lines will be required. ■

TRAIN SPEEDS ALONG while automobile traffic starts to pile up in traditional pattern on Dan Ryan Expressway.

Chicago transit takes advantage of the highway

Median-strip operation promises many benefits for expressway passengers. New stainless-steel transit cars are on the way.

Soon a Chicagoan will be able to sit back in the relaxed, air-conditioned comfort of his new transit car, unfold his favorite newspaper, perhaps discuss the fortunes of the White Sox or Cubs with his seatmate, or maybe just take a short snooze if he so desires . . . and at the same time go hustling along the Dan Ryan Expressway at speeds up to 55 mph, right at the peak of the rush hour.

What's the gimmick? There isn't any. As the Chicago Transit Authority has been promising expressway motorists all along, rapid transit is "coming up the middle" of the Dan Ryan, in its median strip (RA, Jan. 6/13, p. 17). And it's coming to the John F. Kennedy Expressway, as well. On hand to enhance the new CTA service will be a new fleet of 150 stainless-steel transit cars being built by the Budd Co. at a cost of almost $19 million.

● **Coming in the Fall.** CTA expects to have the new 9.5-mile Dan Ryan line in revenue operation this Fall. The Kennedy line will be ready shortly later. Delivery of the new cars—the first of stainless-steel construction ever ordered for the CTA—is lagging somewhat. Officials are confident, however, that the two lines will be able to function efficiently while the remainder of the order is being delivered. Some of the air-conditioned 1964 model cars now operating on the system's Lake Street run will be available for the expressway line passengers.

The CTA learned from a survey last year that it could expect about 165,000 passengers a day on the new extensions. City and authority officials are hopeful that perhaps 26,000 or more of these will be lured from the ranks of the motorists now helping clog the expressway system during morning and evening traffic crushes. What with the rush hour being a transit system's finest hour—and an expressway motorist's worst—the median strip operation could help fulfill the officials' hopes. And if showing off a service that is unhampered by traffic jams doesn't coax a large group of motorists out of their automobiles, then the new stainless steel cars will. Here are a few of their special features:

—Plenty of air-conditioning, a full 10 tons of it.

—Broad (36 in.), cushioned seats, for broad appeal and comfort.

—Giant size (40-in. x 45-in.) picture windows.
—Cool, bright fluorescent lighting.
—Smooth, quiet riding quality.

● **Curves and car length.** Layout of the median strip lines permitted the CTA to select cars of a much longer design. However, because the cars would be required to operate over existing lines, which have some severe curves, a shorter design had to be selected. "From operating and maintenance standpoints, longer cars are much more economical," says George Clark, CTA's chief equipment engineer. "But we had to choose a design which would be compatible with the entire system, and one, of course, which would permit us to move the cars to our shop for maintenance and service."

"The air-conditioning in our 2000-series cars (1964 models) has been very effective," says Clark. "What few complaints we've had about it over the years have concerned its over-effectiveness. Some riders said that they got too cold, that they were being caught in pockets of very cool air."

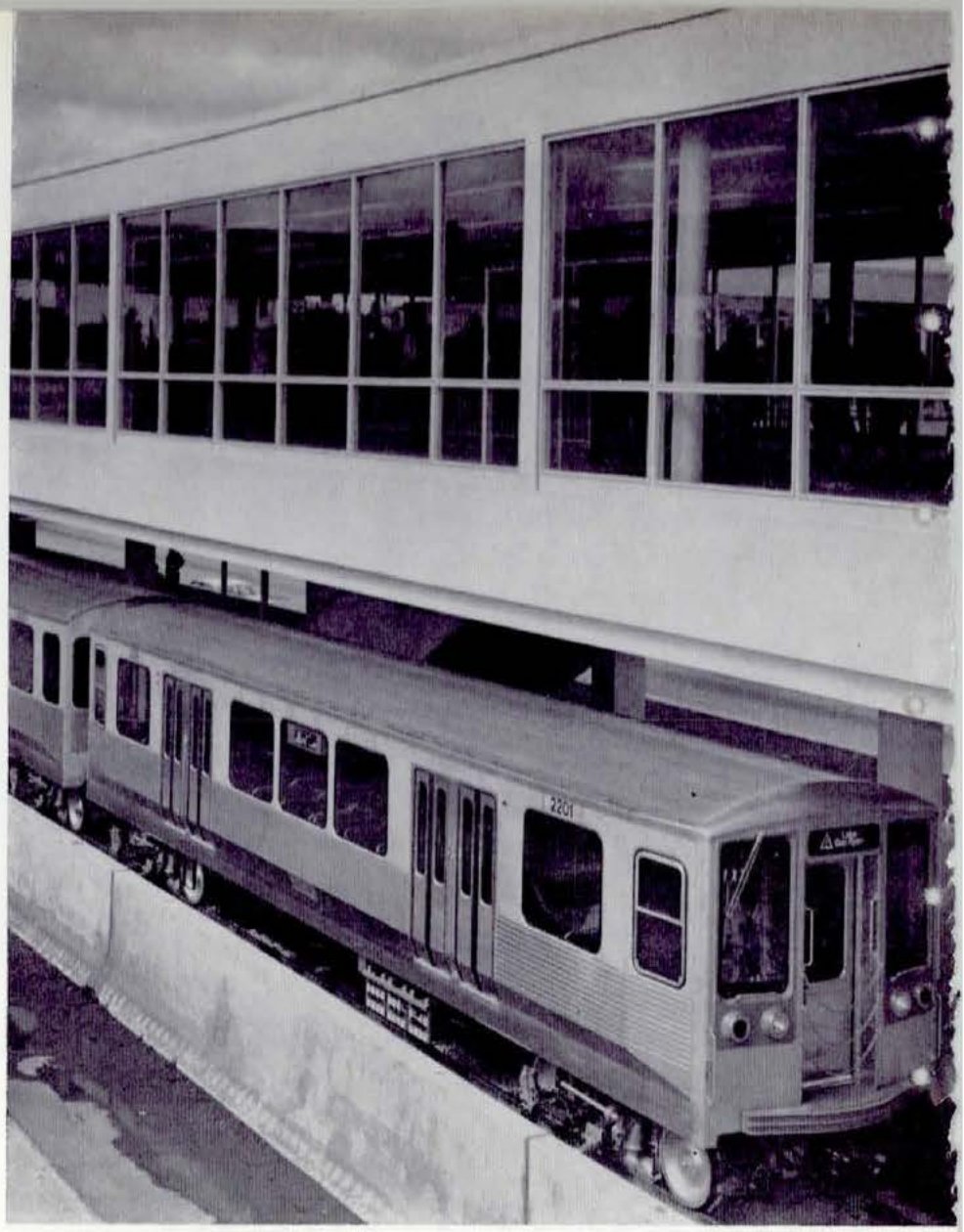
To prevent such pockets, and to avoid the occasional annoyance of water condensation dripping off the ceiling-mounted evaporator, the air-conditioning system in the new cars is a complete re-design. The 10-ton unit for each car is being mounted under the car. Cooled air will enter through side wall distributors.

● **Stainless steel bodies.** The CTA elected this time to go with stainless steel body construction, rather than the painted (white and green) aluminum construction used in the previous order. The aluminum cars, with their fiber glass front ends, have been quite serviceable, Clark reports. "But we feel that the stainless steel bodies will be less expensive to maintain."

The cars' large picture windows, which passengers seem to like, but which cost $45 to replace, might create a new maintenance problem. "We're just hoping—you might call it, 'wishful thinking'—that since the windows are so very big, missile-throwers won't consider them a challenge," Clark says.

The new cars have transverse seating. Standard plywood, treated to resist decay and mold, and faced with RCA rubber tile, forms the flooring.

● **Pioneer trucks.** From a mechanical standpoint, perhaps the most radical change in the new cars, compared with the 1964 models is in the trucks. Budd's special Pioneer trucks are being used. After a computer study of CTA operations, Budd engineers suggested that the truck wheel base of the cars be reduced from 6½ ft to 6 ft 3 in. This was suggested, according to Clark, so that some vibrations created by the cars as they passed over certain elevated sections could be reduced. Riders, says Clark, may not notice the reductions in vibrations as much as persons living near the lines.



AT REST—FOR A WHILE

Some of the Chicago Transit Authority's new Budd-built stainless-steel equipment is shown at the 95th Street terminal in the median of the Dan Ryan Expressway.

Car weight has been reduced wherever possible. Much of this has been accomplished within the trucks. Trucks have aluminum-centered wheels, which save 800 lb per car. The first of their kind ever used by the CTA, they have steel treads which are "sweated on" to create a reliable bond between the two metals. CTA believes these wheels will give one million miles of service, perhaps more.

Tubular, instead of solid, axles are being used. CTA thinks these axles will produce a 17% weight saving in the axles, with no essential loss in strength or performance.

The new cars couple automatically. The cars' centerlock and jumper switch in the coupler operate automatically and electrically. Jumper switch automation has been made possible by designing retracting electric-coupler contacts and automatically switching only critical circuits during the uncoupling process. A plunger on the upper left side of the mechanical coupler head provides the mechanical movement necessary for automating the jumper switch and coupler centerlock.

● **Top speed of 55 mph.** Equipped with 100-hp General Electric 1250 K1 traction motors (4 per car), which are interchangeable with those on the 1964 model cars, the new cars are capable of accelerating at 3.2 mi/hr/sec in the peak position of four power positions. They can attain a speed of 70 mph. The motors have been governed, however, to limit the top speed to 55 mph.

The choice of a motor capable of attaining 70 mph is a hedge against the future, Clark explains. "Right now,

we don't plan to operate these cars over 55 mph," he added. "But, who knows, maybe at some time in the future our system will be able to accept such speeds. Some of the cars operating on our lines were built back in 1922—that's 47 years ago. Who then would have dreamed of speeds of 55 mph, such as we have now?"

The new cars' braking system probably has one of the fastest decelerating rates of any transit cars in existence. In emergency—the braking system's fourth position—dynamic, friction and track braking are applied (and in that order) to produce a deceleration rate of 6.2 mi/hr/sec.

Both acceleration and braking (except emergency) are controlled so that passenger discomfort should be negligible.

Continuing a policy started with the 1964 model cars, the new CTA cars are being equipped with cab signal overspeed equipment. Automatic Train Control (ATC) helps assure that trackage and trains are used at peak capacity and efficiency. Safe operation is obtained by sounding an alarm when the authorized speed is exceeded. If the motorman fails to heed the signal, an emergency stop is initiated automatically.

The cars are also equipped with a public address system, trainphones for two-way communication between trains and CTA's operations control in downtown Chicago, and an intercom system.

● **Fleet of 1,307 cars.** Installation of the two median strip lines raises the CTA's total rapid transit trackage up from just under 160 mi. to over 192 mi. Because of this increase in the size of the system, there are no plans to reduce the transit car fleet, which will number 1,307 cars when the 150 new stainless-steel cars are delivered.

Total cost of the over-all transit improvement program, including the $19 million for the new cars, is $107 million. The city of Chicago and the Federal government are sharing the costs. The city's one-third share is being paid for out of transit bond funds.

Aside from laying new tracks (continuous welded rail on reinforced concrete ties) in the expressways' median strips, several new stations have been erected at strategic locations. On the Dan Ryan, the south extension of the expressway system, there are new stations at 95th, 87th, 79th, 69th, 63rd, Garfield Blvd., 47th, 35th-33rd, and Cermak Road. Escalator service supplements stairs at each location.

On the Kennedy line, a new terminal has been constructed at Jefferson Park near Milwaukee Ave. In addition, new stations have been installed at Logan Square, Belmont, Addison, Irving Park-Pulaski, and Montrose. ■

LUTHER MILLER

AS THE EDITOR SEES IT

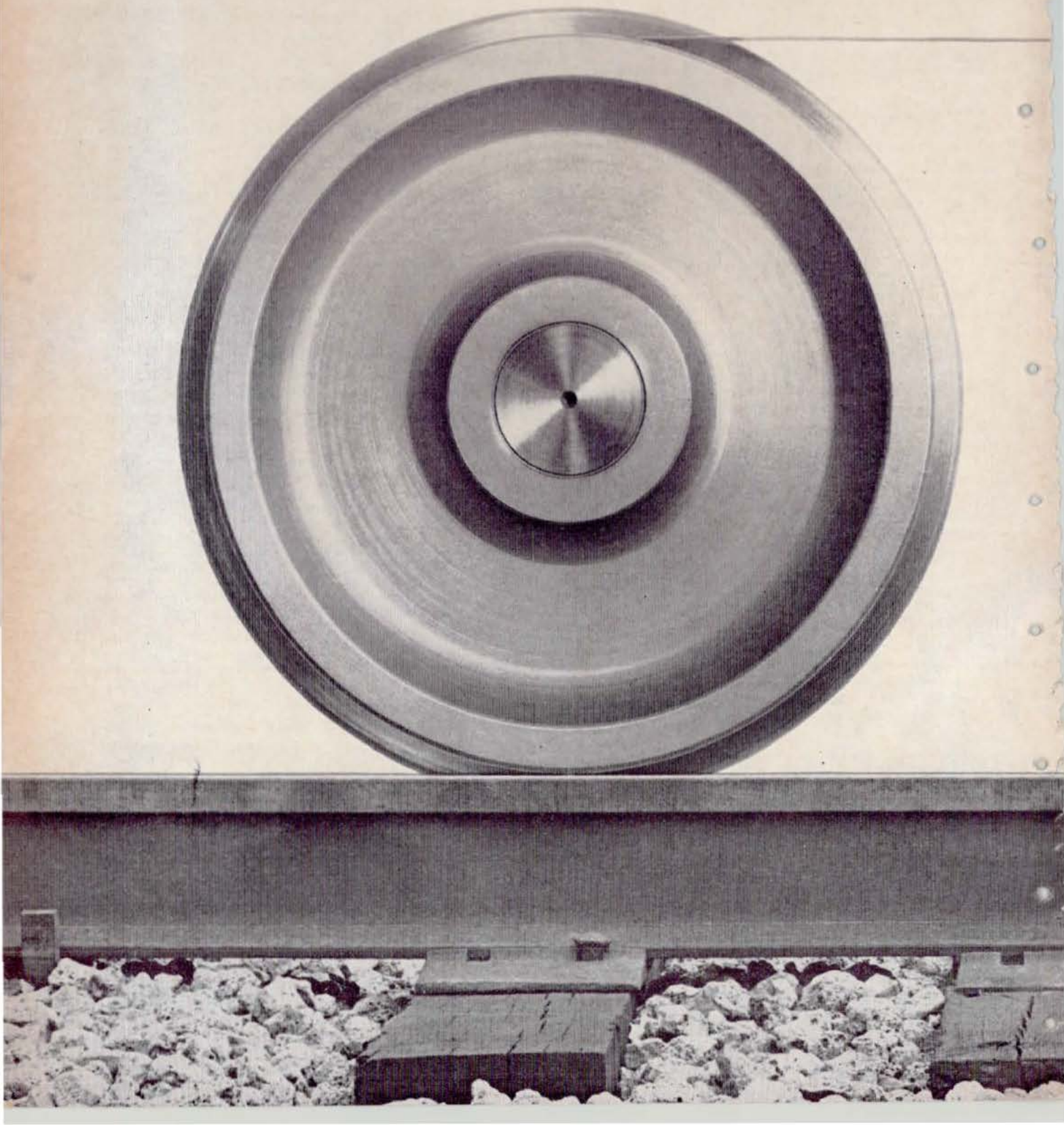
WHO KILLED THE TRANSIT TRUST FUND? President Nixon is getting the blame. It was certainly he who delivered the coup de grace. But many of those who now complain that the President's proposals are too little, too late must themselves share the blame. Their own efforts on behalf of the transit trust fund were far too little; and they came far too late. The trust-fund concept died at the White House, true; but the underlying cause of death was years of neglect at the grassroots.

MANY MAYORS MADE MANY SPEECHES for many years about the need for long-term Federal transit aid. But how many of them troubled to pressure Washington—with the same passion, for example, that they importune Washington for the new highways and for something out of the waterways pork barrel? Railway Age two years ago interviewed the mayor of one of our leading cities—a man who, at that time, was reputed to have great influence with the incumbent Administration. He made an eloquent appeal for just the kind of transit aid a trust fund would provide. He was asked what he proposed to do to muster support in Washington. "Oh, that's up to you fellows in the industry," he said. "You've got to carry the ball because you're the ones who are going to benefit." He has not been heard from since, to our knowledge.

THE "FELLOWS IN THE INDUSTRY," for their part, were slow to get organized in Washington, and they never did get organized with anywhere near the degree of efficiency and style that the highway lobby has boasted for years. Towards the end, the various interests were better organized and, given small budgets and little time, the suppliers and operators associations and the National League of Cities and the U.S. Conference of Mayors did a great job. Had they worked at the same pace with the same sense of urgency for two years instead of two months, the message might have penetrated to the White House.

SAY THIS FOR JOHN VOLPE, the Secretary of Transportation, and for Carlos Villarreal, the Urban Mass Transportation Administrator, and for former Seattle Mayor James Braman, Assistant Secretary for Urban Systems and Environment: They fought a good fight. The fact that the President went as far as he did is a tribute to their unflagging energy and to their tenacious dedication to long-term solutions. We owe these gentlemen our applause and our thanks. To ourselves we owe a searching reappraisal of the way we do—and don't—get things done in Washington.

Westinghouse ran Boston's rapid transit trains through the computer... and came out with major savings in cost, power and weight.



The Massachusetts Bay Transportation Authority has purchased rapid transit cars for its new 9.5-mile South Shore Line to specifications established with the help of Westinghouse Train Simulation computer program.

The studies covered interconnecting lines as well as the new line. We assisted MBTA in reducing car weight, size of the propulsion system, power consumption and maintenance costs, with a minor change in requirements. Total savings in cost, power, weight and maintenance come to millions of dollars during the life of the fleet. Pullman-Standard will supply 76 high-speed cars with Westinghouse Tracpak propulsion drives, controls and auxiliary power systems.

When you're planning a rapid transit system, let Westinghouse engineers supply the facts you need for a decision on optimum equipment specifications. We offer a full range of medium- and high-performance Tracpak propulsion units, auxiliary equipment and controls.

Call the Westinghouse transportation specialist in your area or write Westinghouse Electric Corporation, Transportation Division, Avenue A and West St., East Pittsburgh, Pa. 15112.

You can be sure...if it's

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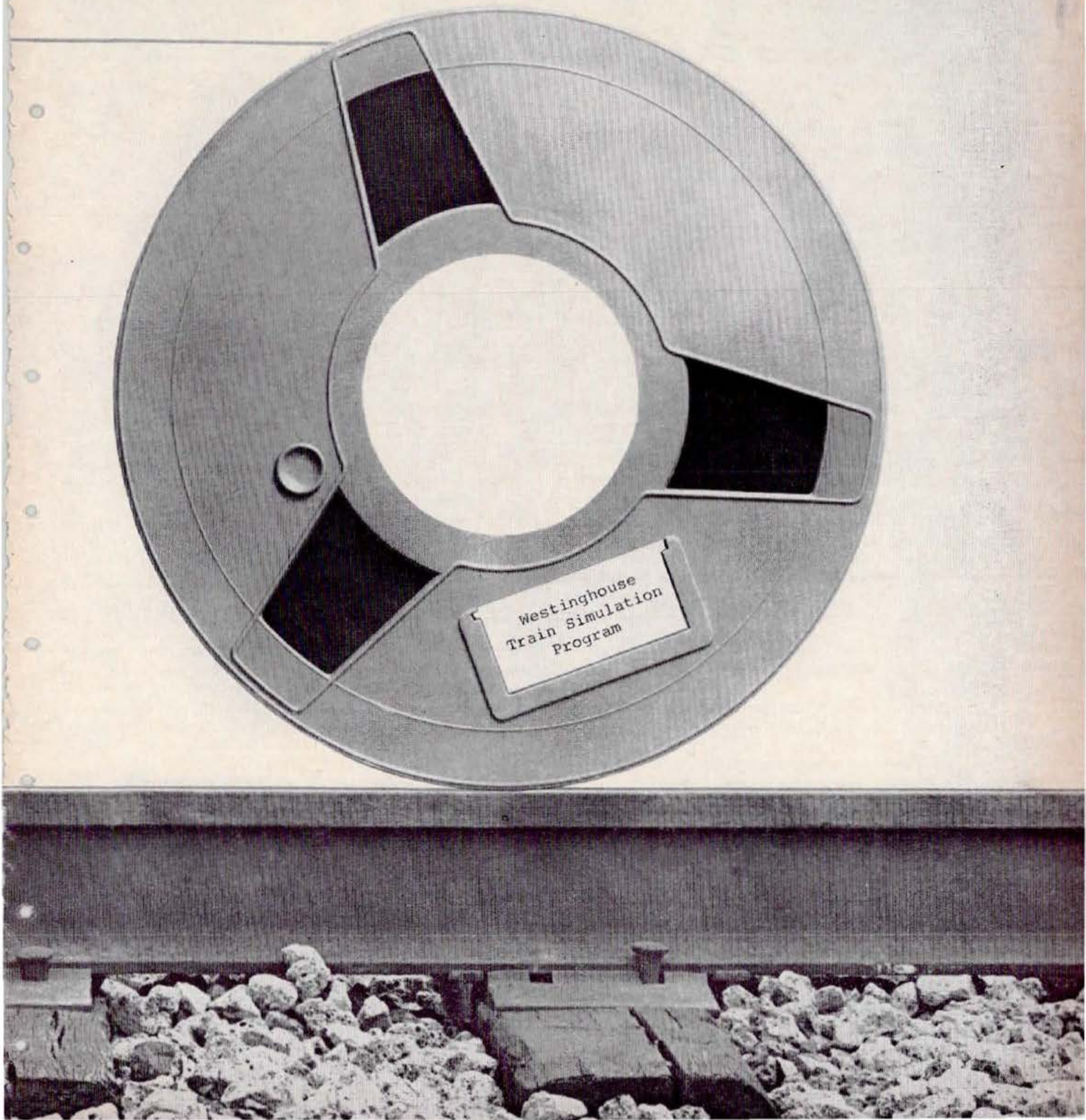


HEARNES OF MISSOURI:
"Relying upon annual appropriations by Congress would create continual uncertainty . . ."

STOKES OF CLEVELAND:
"The President's mass-transit proposal falls far short of meeting our hopes . . ."

ALLEN OF ATLANTA:
"The trust-fund approach is the sensible method that should be used for mass transit . . ."

Transit strategists will try to strengthen Nixon bills

"Contract authorization" was supposed to be the magic phrase in President Nixon's mass-transit message to Congress. But the magic hasn't worked.

The long-term funding commitment which "contract authorization" suggests simply isn't to be found in the Adminisration bills now before the Senate and the House, say legal experts who have studied the legislation.

Last week, criticism of the President's alternative to a transit trust fund was mounting as experts read the small print. Enough of this criticism was centered in Congress itself to suggest that the Nixon program is in for a rough ride.

The President had some supporters—among them Senator Gordon Allott of Colorado, an opponent of the trust-fund approach. And Los Angeles Mayor Sam Yorty applauded the President's program in general terms. But a wider view seemed to be expressed by New Jersey's Senator Harrison Williams, who called the President's program "ill-advised," and said tartly: "The motto of this Administration should not be, 'If you've seen one traffic jam, you've seen them all.' "

● **What Nixon said.** "I propose," Mr. Nixon told Congress, "that we provide $10 billion out of the general fund over a 12-year period to help in developing and improving public transportation in local communities. To establish this program, I am requesting contract authorization totaling $3.1 billion for the first five years starting with a first-year authorization of $300 million and rising to $1 billion annually by 1975. Furthermore, I am asking renewal of this contract authorization every two years so that the outstanding contract authorization will never be for a shorter period than three years. Over the 12-year period, $9.5 billion is programmed for capital investment and $500 million for research and development."

Thus did the President reject the pleas of his own Secretary of Transportation, John A. Volpe, for a transit trust fund.

Volpe insisted that he was pleased with the President's proposal: "We are confident that the American public will see and ride tangible results of this legislation within three years of the time it is passed and signed into law."

Less confident was the American public, as represented by some vocal Congressmen, mayors, governors and the daily press.

● **Reason for skepticism.** The Washington Post got to what many felt was the heart of the matter: "The highway program has been funded at a high level . . . because of the trust fund established to finance it. . . . This same approach, urged on Mr. Nixon by the mayors of most cities and many congressmen for urban transit has been rejected, apparently because the economists and the budgeteers do not approve of it. Their approach is to persuade Congress to authorize the spending of $10 billion over 12 years and then go back to Capitol Hill every two years to get the actual money to spend. It is here that the Nixon program possesses the potential of becoming a sham. . . . In light of the experience of the District of Columbia in getting subway appropriations (as contrasted with the original authorization) and of the housing program in getting the money needed to fulfill the promise of last year's Housing Act, it is well to regard Mr. Nixon's transit program with a healthy degree of skepticism."

● **Bi-partisan opposition.** The criticism did not follow party lines. New Jersey's Republican Senator Clifford Case cited "the uncertainties of the Congressional appropriation process," and warned: "This is the shoals on which many an excellent federal project has foundered."

Said Missouri Governor Warren E. Hearnes: "Relying upon annual appropriations by Congress would create continual uncertainty—and that is the last thing we want if rapid transit is to become a reality.

Cleveland Mayor Carl Stokes told Railway Age: "I have consistently advocated the same sort of 90-10 financing for mass transit that has created the Interstate Highway System. The President's proposal, involving dependence each year on the mood and inclinations of the Congress, falls far short of meeting our hopes."

Atlanta Mayor Ivan Allen, Jr., found the program both too small and too uncertain:

"It would be extremely difficult and unrealistic to match our long-range transit plans with unpredictable annual appropriations. The trust fund approach is the sensible method that should be used for mass transit planning and construction."

● **Defining "contract authority."** In reply to criticisms like these, the Administration reiterates the phrase about "contract authority" and suggests that this is sufficient guarantee of long-term financing.

But critics insist that this guarantee simply isn't there. Says one: "The Administration bill says you can obligate funds against the authorization at the beginning of the fiscal year in which it becomes available. Any way you look at it, it comes to the annual handout, if Congress feels like handing it out."

A "contract authority" similar to that now proposed for transit, this critic claims, was written into the urban renewal program—"and we all know what a sham that turned out to be."

● **What now?** This does not mean, as these experts see it, that contract authority won't work for transit funding—provided the present provision is substantially strengthened.

To get this stronger provision will apparently be the strategy of those in Washington who have been working behind the scenes for effective transit-aid legislation.

It is a commonly held belief that "one Congress cannot bind another" and that short of a trust fund, similar to the highway fund, there is no alternative to the annual queueing up for an appropriation. This is not, strictly speaking, true. Those who want a stronger long-term commitment written into the present legislation cite the home-mortgage-interest subsidy bill. This permits a homeowner to take out a 30-year mortgage with the assurance that the Federal government will pay a stated percentage of the interest on that mortgage for those 30 years. While a later Congress can repeal that legislation, the repeal would not apply to obligations already contracted.

It is this kind of authority that the National League of Cities and the U.S. Conference of Mayors now hope to get inserted into the President's bills. ■

Excerpts from the President's transit message to Congress

Public transportation has suffered from years of neglect in America. In the last 30 years urban transportation systems have experienced a cycle of increasing costs, decreasing funds for replacements, cutbacks in service and decrease in passengers.

Transit fares have almost tripled since 1945; the number of passengers has decreased to one third the level of that year. Transit industry profits before taxes have declined from $313 million in 1945 to $25 million in 1967. In recent years 235 bus and subway companies have gone out of business. The remaining transit companies have progressively deteriorated. Today they give their riders fewer runs, older cars, and less service.

Local governments, faced with demands for many pressing public services and with an inadequate financial base, have been unable to provide sufficient assistance.

This is not a problem peculiar to our largest cities alone. Indeed, many of our small and medium-sized communities have seen their bus transportation systems simply close down.

When the Nation realized the importance and need for improved highways in the last decade, the Congress responded with the Highway Act of 1956. The result has been a magnificent federally-aided highway system. But highways are only one element in a national transportation policy. About a quarter of our population lack access to a car. For these people—especially the poor, the aged, the very young and the handicapped—adequate public transportation is the only answer.

Moreover, until we make public transportation an attractive alternative to private car use, we will never be able to build highways fast enough to avoid congestion. As we survey the increasing congestion of our roads and strangulation of our central cities today, we can imagine what our plight will be when our urban population adds one hundred million people by the year 2000.

We can not meet future needs by concentrating development on just one means of transportation. We must have a truly balanced system. Only when automobile transportation is complemented by adequate public transportation can we meet those needs.

●

The program which I am recommending would help to replace, improve and expand local bus, rail and subway systems. It would help to develop and modernize subway tracks, stations, and terminals; it would help to build and improve rail train tracks and stations, new bus terminals, and garages.

●

In addition to assistance for capital improvements, I am proposing substantial research and technology efforts into new ways of making public transit an attractive choice for owners of private cars. These would include:

- Advanced bus and train design to permit easier boarding and dismounting.
- Improved interiors in bus and trains for increased convenience and security for riders.
- New Traffic control systems to expedite the flow of buses over streets and highways.
- Tracked air cushioned vehicles and automated transit.
- Flexible bus service based on computer-forecast demands.
- New bus propulsion systems which would reduce noise and air pollution as well as cost.
- Systems such as moving sidewalks and capsules to transport people for short distances within terminals.

TORONTO TRANSIT COMMISSION

TENDERS FOR SUBWAY CARS

Sealed tenders, endorsed "Tender for Subway Cars", will be received by the Toronto Transit Commission at its office, 1900 Yonge Street, on Monday, the 27th day of October, 1969, until 4:00 P.M. Eastern Standard Time.

The work for which such tenders are invited consists of the design, construction and delivery of up to 100 subway passenger motor cars for operation in trains of from two to six cars, as specified in the Contract Documents and Specification. Delivery is required during 1971.

All tenders must be made upon blank forms of tender as furnished by the Toronto Transit Commission and included in the Contract Documents and shall be made in accordance with the provisions contained in said documents and must be accompanied by cash or certified cheque, payable to the Commission, in the amount of $300,000.

The successful tenderer will be required to execute the performance bond included in the Contract Documents.

The Contract Documents ,including specification, are available to the tenderers at the Commission's Equipment Department office, 1138 Bathurst Street, Toronto, Ontario. A deposit of $100 is required for each set of Documents. This deposit is refundable on return of Contract Documents and Specification in good condition within 30 calendar days after opening of the tenders.

The opening of tenders will take place at the Commission's office, 1900 Yonge Street, (6th floor Conference Room), Toronto, at 9:30 A.M. on Tuesday, 28th October, 1969, at which time tendering contractors are invited to have a representative present.

The Commission reserves the right to reject any or all tenders.

H. E. Pettett,
General Secretary

Bert L. Strohl
PC

Frank A. Crovo, Jr
RF&P

Norman C. Stiles
Southern

Wm. J. McDonald, Jr.
UP

PEOPLE IN THE NEWS

NORFOLK & WESTERN.—Walter S. Clement, vice president, Western Region, St. Louis, appointed vice president at Washington, D. C.

Jean Jones has joined the N&W as assistant vice president–budget and planning, Roanoke, Va. He was formerly vice president and consultant, Wyer, Dick & Co., Inc., prior to which he was assistant to comptroller, **Seaboard.**

Albert E. Suter, manager–sales and service, Cleveland, named general coal traffic manager–sales and service there. **Michael B. Grim** appointed coal and ore traffic representative, Beckley, W. Va.

Robert C. Smith has joined the N&W as manager systems evaluation. Mr. Smith has been employed by IBM in Roanoke on systems and applied science and has been IBM's representative on the N&W since 1962.

Irwin L. Francis promoted to assistant manager employee benefits.

PENN CENTRAL.—Bert L. Strohl, general superintendent–transportation, Lake Region, Cleveland, Ohio, appointed assistant general manager, Central Region, Pittsburgh, Pa., succeeding **William C. Wieters,** who has been named assistant general manager–special duties, Philadelphia.

PIEDMONT & NORTHERN.—M. D. Clark, chief engineer, Charlotte, N.C., retired June 30, after 45 years of railroad service.

PITTSBURGH & LAKE ERIE.—John J. Dan, assistant vice president–freight sales, **Penn Central,** Cleveland, appointed assistant vice president–freight sales and service, P&LE, Pittsburgh, succeeding **Harvey L. Willard,** who retired Aug. 1., after 44 years of servcie.

Robert L. Teeter, regional engineer, design and construction, **Penn Central,** Cleveland, appointed chief engineer, P&LE, Pittsburgh, succeeding **Joseph J. Eash,** who will head the PC's Communications & Signal Department.

RICHMOND, FREDERICKSBURG & POTOMAC.—Frank A. Crovo, Jr., assistant comptroller, promoted to comptroller, effective Sept. 15.

ROCK ISLAND.—Herbert F. Longhelt named engineer maintenance of way. He was formerly assistant engineer maintenance of way, **Illinois Central.**

ST. LOUIS SOUTHWESTERN.—David E. Ramaley appointed general agent, New York, succeeding **Howard V. Engle,** transferred to Cleveland, Ohio, to replace **John F. Russell,** retired.

SANTA FE.—J. D. Johnson named superintendent of better freight handling and special service, Topeka, Kans.

SEABOARD COAST LINE.—B. H. Trull Jr., director purchasing and stores, Charlotte, N. C., appointed assistant purchasing agent, Jacksonville, Fla. **D. L. Smith,** named manager–real estate.

On May 1 the Jacksonville and Waycross test laboratories were consolidated at Waycross, Ga., and placed under jurisdiction of the mechanical department. **J. W. Hawthorne,** assistant vice president–equipment, will be in charge of all matters relating to test functions.

James E. Williams appointed assistant general solicitor, Jacksonville, Fla.

SOUTHERN.—Leonidas H. Smith, Jr., superintendent, Hattiesburg, Miss., appointed superintendent, Eastern Division, Greensboro, N. C., succeding **Frank M. Kaylor,** appointed vice president, **Cincinnati, New Orleans & Texas Pacific,** at Cincinnati. **Herbert L. Bishop, Jr.,** assistant superintendent, Birmingham, Ala., succeeds Mr. Smith at Hattiesburg.

James S. W. Drewry appointed solicitor, Washington, D. C.

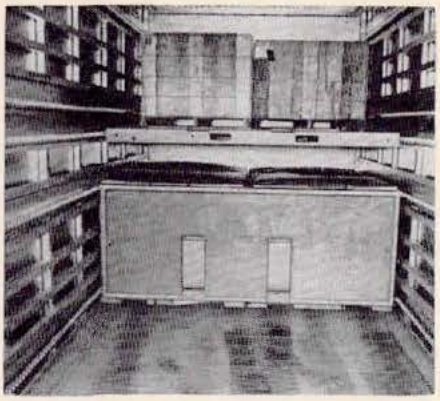
Edwin F. Neagle named director of tax administration, remaining at Washington, D. C. He succeeds **Thomas M. England,** retired after more than 42 years of service. **Edwin C. Maska** succeeds Mr. Neagle as director of tax review.

Norman C. Stiles, assistant to vice president, promoted to assistant vice president, purchasing and material management, Washington, D.C., succeeding **Anthony G. Bohorfoush,** who retired July 29, after more than 52 years with the Southern.

SOUTHERN FREIGHT ASSOCIATION.—Z. C. Berry, assistant tariff publishing officer, **Southern Freight Tariff Bureau,** Atlanta, Ga., promoted to tariff publishing officer, succeeding **W. E. Block,** who

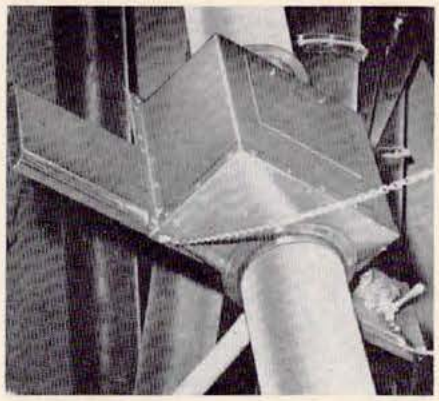
(Continued on page 32)

NEW PRODUCTS REPORT



Carloading system (RA-1)

The PDQ system is designed to handle virtually any type of lading on a fully mechanized basis which results in faster, easier loading, increased payload per car, and substantially reduced damage in transit, particularly in the case of widely varied lading handled in the same car. Because the basic module in the system is the PDQ platform itself—a pallet-like component which locks horizontally or vertically into slotted belt rails permanently attached to car sides—each unit can be used as a pallet, as a platform (deck), or as a divider. As a platform or pallet, the unit can be preloaded with cartons or containers, then positioned into the car with a lift truck. As a deck, the unit can be placed in different height positions throughout the car length. This "second deck" can either be preloaded outside the car, then positioned, or positioned first and loaded later. As a divider, the unit can be locked vertically in position to restrain the forward-backward movement of the lading under impact. *Unarco Industries, Inc.*



Automatic sampler (RA-2)

Automatic samplers for bulk products such as sugar, chemicals, insecticides, plastics, beans and grain are available with highly abrasion-resistant liners in dividers and other components subject to wear. Designs include cross-cut samplers, belt dividers, belt samplers and Swing-Flo samplers. The design, combined with an installation and servicing organization, has made possible long-term guarantees, regardless of the volume of material which is handled. *International-Stanley.*

Emergency light unit (RA-3)

The U/L approved Big Beam S6L series full silicon solid state emergency lights feature automatic 3-rate solid state charger, automatic solid state transfer switching, and a 6-volt lead-acid battery with three colored hydrometer indicating discs which show approximate state of charge. A 2-head unit illuminates 10,000 sq ft for 16½ hr; 5-head unit, 25,000 sq ft for 4½ hr. Recharge within 12 hr after these rated burning hours represents a discharge to 91%. *Teledyne Co.*

Fiberglass coated panels (RA-4)

The high temperatures and pressures at which the fiberglass coated plywood panels are manufactured are said to provide a high-quality weatherproof exterior bond between the fiberglass and the wood. The panels, suitable for container use, are available in sizes up to 12 ft. wide by any length up to 40 ft., with a glass content 25 to 40% by weight. Standard colors are gray and off-white. Panels can be steam cleaned. *Evans Products Co.*

Fog-proof goggle lens (RA-5)

The Hydron permanently anti-fogging safety goggle lens is said to be, essentially, a permanent, cured chemical bonding that enables the lens to absorb and retain moisture while remaining perfectly clear. The absorbed moisture evaporates when the lens is returned to a normal atmosphere. In tests, the treated lenses were found to be unaffected by immersion in water, alcohols, dilute acids, alkalis and detergents. *American Allsafe Co.*

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PLEASE SEND INFORMATION ABOUT PRODUCTS DESCRIBED ON PAGE 31 MARKED: RA-1 RA-2 RA-3 RA-4 RA-5

NAME ..... TITLE .....

ADDRESS .....

COMPANY .....

CITY ..... STATE ..... ZIP .....

• Inquiries can be processed only if title and company are shown. 9/1/69

(Continued from page 30)
retired June 30, after 46 years of service.

TEXAS & PACIFIC—TEXAS & PACIFIC MOTOR TRANSPORT CO.—W. C. Watley, Jr. named terminal manager, Shreveport, La.

TRAFFIC EXECUTIVE ASSOCIATION—EASTERN RAILROADS.—A. J. Winkler, chairman, **General Passenger Committee,** appointed manager, **Eastern Weighing & Inspection Bureau,** succeeding **G. J. Keyes,** who retired June 1.

UNION PACIFIC.—William J. McDonald, Jr., general counsel, New York, elected vice president and general counsel. **C. Barry Schaefer** appointed assistant general counsel.

The UP has expanded its Land Division. A new office has been opened at Boise, Idaho, and **Dale W. Hadley** becomes industrial agent there. At Denver, **Lauren A. Fisher** appointed director—land and industrial development, and **Clinton B. Frank** named to the newly created position of assistant to director—land and industrial development. **Otis E. Skinner** named assistant director—land and industrial development, and **George J. Weinert,** industrial agent, both at Portland. At Salt Lake City, **Ronald L. Roberts** appointed assistant to director—land and industrial development. **Richard M. Black** and **Michael C. Gustin** appointed industrial agents, Seattle and Los Angeles, respectively.

Martin J. Philipps, chief clerk to the traffic manager, Kansas City, Mo. named assistant to the traffic manager there.

WESTERN MARYLAND.—Edward W. Bardgett, eastern sales manager, New York, retired Aug. 31, after 37 years of service.

TRANSIT

C. Carroll Carter, assistant executive director, **Pittsburgh Urban Transit council,** appointed assistant administrator for public affairs. **Urban Mass Transportation Administration, Department of Transportation,** Washington.

George W. Haley, appointed chief counsel, Urban Mass Transportation Administration. He is a former member, Kansas State Senate, and at the time of his appointment was a practicing attorney with the law firm of Stevens, Davis & Haley, Kansas City.

Col. Warren J. Higgins, director of planning and development **Massachusetts Bay Transportation Authority,** Boston, appointed to the new position of executive director of planning and construction.

Rogers C. Powers, Jr., has joined the **Port Authority Transit Corporation,** Camden, N.J., as superintendent of equipment on the Lindenwold-Philadelphia rapid transit line. Mr. Powers was formerly superintendent of equipment—marine mechanical, New York area, **Baltimore & Ohio.**

David G. Hammond, chief engineer, **San Francisco Bay Area Rapid Transit District,** promoted to the new position of assistant general manager for operations—paralleling the present post of assistant general manager for administration, now held by **L.A. Kimball.** Mr. Hammond will be responsible for engineering construction, real estate acquisition and transit operations. Mr. Kimball will continue to administer the organization during the absence of the general manager and will supervise personnel finance, public relations, legal and general services.

Hyman Feldman, general superintendent of surface transportation, **New York City Transit Authority,** named executive officer for maintenance and operations., succeeding **Walter L. Schlager, Jr.,** named president, **Long Island** (RA, Aug. 4 p. 7).

Harry L. Parrish, Jr., assistant to general manager, **Southeastern Pennsylvania Transportation Authority,** appointed director of Improvement Projects. **Wilbur C. Webb** named projects administrator. **Anthony R. Sloan** appointed manager, Planning and Marketing Projects Division.

OBITUARY

Thomas T. Blickle, 59, retired general manager-mechanical department, **Santa Fe,** died Aug. 19 in La Grange Community Memorial Hospital, La Grange, Ill.

Ralph O. Jensen, 74, retired superintendent, **Soo Line,** died Aug. 10 in Lutheran General Hospital, Park Ridge, Ill.

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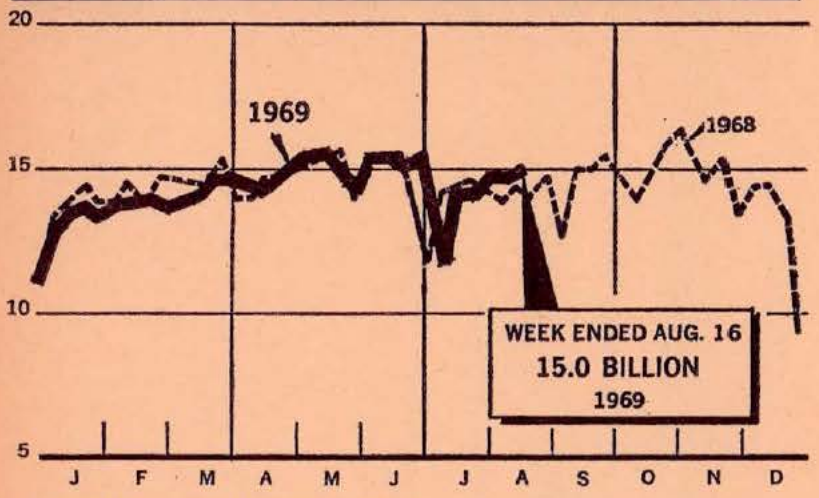
Circle 9 on coupon page 31

RAIL FREIGHT TRAFFIC TRENDS

BILLION TON-MILES (Estimated)



Source: Association of American Railroads

NEW ORDERS FOR MACHINE TOOLS*

	June 1969 ($000)	June 1968 ($000)	6 mos. 1969 ($000)	6 mos. 1968 ($000)
Metal cutting tools	110,750	97,750	706,550	536,600
Metal forming tools	47,550	28,800	321,200	139,400

MACHINE TOOL SHIPMENTS*

	June 1969 ($000)	June 1968 ($000)	6 mos. 1969 ($000)	6 mos. 1968 ($000)
Metal cutting tools	123,600	127,600	612,600	712,300
Metal forming tools	38,950	34,300	194,600	184,500

*Including foreign and domestic.
Source: National Machine Tool Builders' Association.

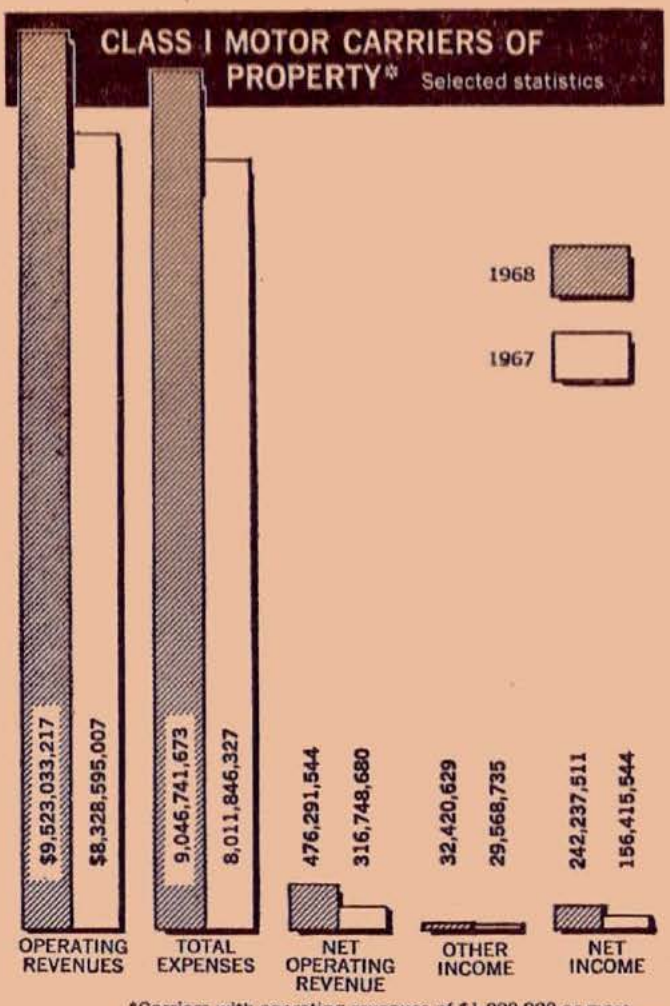
Current Statistics

Net income, Class I roads
Three months, 1969 ..... $ 97,000,000
Three months, 1968 ..... $111,650,113

New freight cars on order
July 1, 1969 50,395
July 1, 1968 17,806

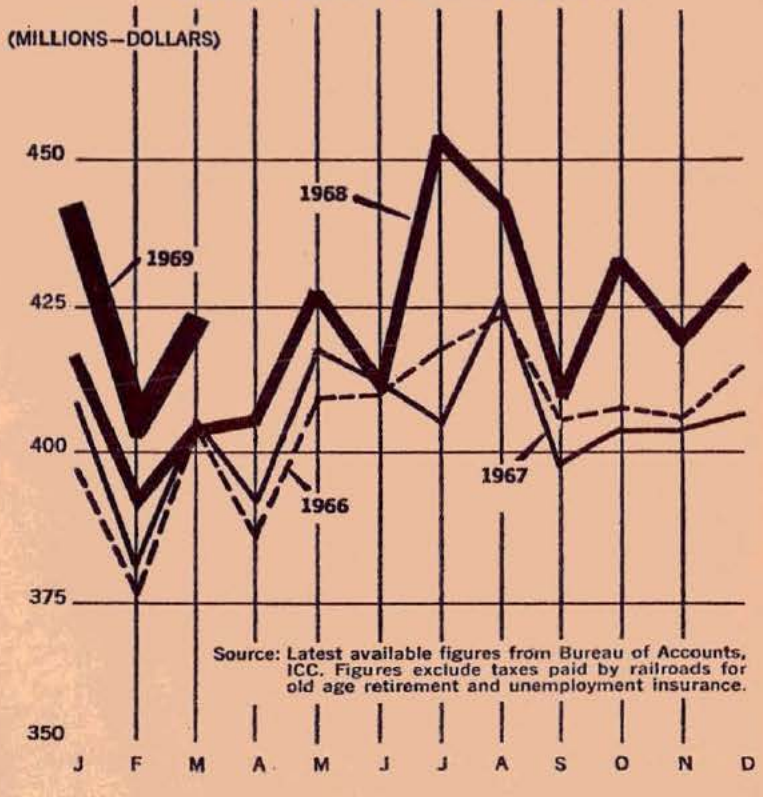
New freight cars delivered
6 mos., 1969 32,836
6 mos., 1968 31,359

Serviceable cars
July 1, 1969 1,369,510
July 1, 1968 1,396,613



*Carriers with operating revenues of $1,000,000 or more.
Source: Bureau of Accounts, ICC. Based on reports of 1,249 intercity carriers.

WAGE STATISTICS CLASS I LINE-HAUL RAILROADS



Source: Latest available figures from Bureau of Accounts, ICC. Figures exclude taxes paid by railroads for old age retirement and unemployment insurance.

MARKET OUTLOOK

CARLOADINGS

Loadings of revenue freight in the week ended Aug. 23 totaled 563,606 cars, the Association of American Railroads announced on Aug. 28. This was a decrease of 3,142 cars, or 0.6%, compared with the previous week; an increase of 15,567 cars, or 2.8%, compared with the corresponding week last year; and an increase of 11,021 cars, or 2.0%, compared with the equivalent 1967 week. Ton-miles generated by carloadings in the week ended Aug. 23 are estimated at 14.9 billion, an increase of 6.7% above the corresponding week of 1968, and 8.2% above the 1967 week.

REVENUE FREIGHT CARLOADINGS

Commodity	Aug. 16 week	Preceding week	Per cent change
Grain	30,277	31,180	— 2.9
Farm products	12,747	12,885	— 1.1
Metallic ores	55,466	57,077	— 2.8
Coal	103,739	104,591	— 0.8
Crushed stone, gravel & sand	33,751	33,902	— 0.4
Nonmetallic minerals	11,846	11,600	+ 2.1
Grain mill products	20,338	19,178	+ 6.0
Food & kindred products	24,046	24,340	— 1.2
Primary forest products	24,804	24,012	+ 3.3
Lumber & wood products (except furniture)	15,825	15,593	+ 1.5
Pulp, paper & allied products	24,545	24,609	— 0.3
Chemicals & allied products	25,211	25,175	+ 0.1
Petroleum products	11,536	11,379	+ 1.4
Stone, clay & glass products	22,759	22,230	+ 2.4
Coke	8,776	7,809	+12.4
Metals & products	27,654	27,103	+ 2.0
Motor vehicles & equipment	15,577	13,301	+17.1
Waste & scrap materials	14,972	14,279	+ 4.9
Forwarder & shipper assn. traffic	8,245	7,576	+ 8.8
All other carloads	72,903	71,589	+ 1.8
LCL traffic	1,731	1,819	— 4.8
Total cars loaded	566,748	561,227	+ 1.0

CUMULATIVE TOTAL,	1969	1968	1967
33 WEEKS	17,627,432	17,801,273	17,644,584

PIGGYBACK CARLOADINGS

U. S. piggyback loadings for the week ended Aug. 16 totaled 26,507 cars, carrying 43,125 trailers, compared with 26,477 cars, carrying 43,550 trailers, in the corresponding 1968 week. Loadings for 1969 up to Aug. 16 totaled 843,005 cars, carrying 1,381,155 trailers, compared with 831,434 cars, carrying 1,349,191 trailers, in the corresponding period of 1968.

CAPITAL EXPENDITURES

● *Chesapeake & Ohio/Baltimore & Ohio.*—Capital expenditures for 1969, now budgeted at $134 million (RA, Aug. 25, p. 11) call for 8,500 freight cars including: 1,500 gondolas for steel shipments, of which 225 will be 65-ft in length for handling large structural units, and 100 of which are equipped for carrying steel pipe; 3,600 box cars, 2,200 of them GP cars, the others having special devices for carrying specific commodities; 2,500 coal hopper cars of 100-ton capacity, (which are being built at the Raceland, Ky., railroad shops); 340 covered hopper cars, and 572 multi-level rack cars. Also included in the 1969 program are 100 diesel-electric locomotives, with delivery to be completed in October by EMD and General Electric. Fifty-six of the new locomotives are for C&O and 44 for B&O. The EMD units are GP 40's, with four axles and 3,000 hp; GP 39's, with four axles and 2,300 hp; and SD 40's, with six axles and 3,000 hp. The GE diesels are of the U23 B type, with four axles and 3,000 hp.

TRANSIT

● *Bay Area Rapid Transit.*—Rohr Corp. of Chula Vista, Calif., prime contractor for 250 BART cars, has awarded a sub-contract to Westinghouse Electric for the supply of propulsion and control equipment, friction brakes, air conditioning, trucks, auxiliary power systems and diagnostic test equipment.

● *Metropolitan Transportation Authority*—Contractors who are currently involved in preparing bids for 300 new high-speed, air-conditioned cars for the New York City Transit Authority have been asked to include an option for 52 additional cars for the Staten Island Rapid Transit system. Bids on the 300 NYCTA cars are due this fall. The option for SIRT cars could be exercised no later than June 30, 1970. MTA Chairman William J. Ronan said this will give the city sufficient time to conclude its negotations with the B&O to acquire the Staten Island transit line and still insure the earliest possible delivery of vitally needed new cars. The SIRT cars will cost an estimated $9-$10 million. This will come out of a $25-million modernization program, which will also include rehabilitation of right-of-way and fixed facilities.

● *Toronto Transit Commission.*—Invites tenders for 36 to 100 new subway cars required for the four-mile Yonge extension now under construction. Tendering documents are available from H. E. Pettett, general secretary, TTC, 1900 Yonge St., Toronto 295, Ont. Bids close Oct. 27. Special attention is given in the spefications to reliability and ease of maintenance, and minimum mean miles between defects have been set out for a number of components.

YOU OUGHT TO KNOW

MLW-Worthington backlog rises to $49 million

MLW-Worthington Limited (Montreal) last week reported that its order backlog at the end of this year's first half stood at more than $49 million, highest recorded by the company since the end of World War II. Henry Valle, president, said recent large orders for locomotives from the Canadian railways combined with "substantial" export sales of locomotives and parts account for the increase. Valle also announced that MLW-Worthington has virtually completed negotiations to acquire the locomotive designs of Alco Products Inc. "This will enable the company to license and service overseas locomotive builders, which will provide an additional source of revenue," he said.

CN furnishes consultants for Korean Railroad

Canadian National is providing consultants to assist in transportation studies being made for the Korean National Railroad by the management consulting firm of P. S. Ross & Partners. Areas to be studied include traffic costing, uneconomic lines, design and maintenance of freight cars, and class yards. The arrangement with CN was made through the railroad's international consulting division.

NWU plans sessions on marketing, profits

Two management development conferences covering marketing and profit strategy have been scheduled for this fall by the Northwestern University Transportation Center. An eight-day program in marketing strategy begins Oct. 11. An eight-day session on profit strategy starts Nov. 8. Information is available from C. Page Townsley, director of management programs, Transportation Center at Northwestern University.

LIRR files rate complaint with ICC

The state-owned Long Island filed a complaint with the ICC last week charging some 200 other railroads with "unfair and unlawful" divisions of freight revenues. The action came after the Commission denied LIRR's request that it investigate the divisions on its own initiative (RA, March 31, p. 7). William J. Ronan, chairman of the Metropolitan Transportation Authority, which operates the railroad, said that while freight operations produced only 11.5% of the carrier's total operating revenues of $86 million in 1968, they accounted for more than half of its $13-million deficit.

RSMA schedules program on track systems

Railway Systems and Management Association's Sept. 11-12 seminar on railway track systems will be a world-wide affair—designed, RSMA says, "to demonstrate the tremendous amount of resources which railroads throughout the world are devoting to their roadway environment." Discussions will cover construction and maintenance techniques from Australia, Germany, Great Britain and Sweden, as well as the U.S. and Canada. Co-chairmen for the meeting (which will be held in Chicago's Knickerbocker Hotel) will be Arthur N. Butland, chief engineer-ways and works (ret.), British Railways Board; and J. J. Schmidt, director of research services-Planning Department, C&O/B&O. Keynoter will be Union Pacific's R. M. Brown, chief engineer-engineering, bridges and roadway.

New firm will specialize in global traffic

Two former REA Express officers have established a new firm—H. P. Rothlisberger Associates, Inc.—that will "specialize exclusively in international traffic consulting and related coordination services for worldwide importers, exporters, carriers, warehouse operators and forwarders." Co-founders are Henrik P. Rothlisberger, former director of international sales for REA, who as president will head the firm's New York office; and Hubert Wiesenmaier, formerly REA's Pacific regional manager of international services, who as vice president will head the San Francisco office.

LETTERS

Golden Spike Centennial

Lima, Ohio

To the Editor:

"As the Editor Sees It" in the May 26, 1969, issue of Railway Age is certainly worthy of commendation. I was especially happy to note your remarks relative to Mr. Ross Rowland, Jr., President of High Iron.

It is my honor and pleasure to have become acquainted with him during the past year and to have been a guest on the Golden Spike Centennial Special for several days as well as being a guest on other trips with Nickel Plate steam locomotive No. 759 which was built here in Lima.

The entire article mentioned above ought to be circulated among railroad people everywhere. You are right in emphasizing the contributions which several people made toward the success of the Centennial Celebration. As you mention, the Golden Spike Centennial Special kept it in the public eye almost constantly. . . .

John H. Keller
President, Local No. 200
United Transportation Union

The "Zephyr"

Salt Lake City, Utah

To the Editor:

I review with great interest the articles published in Railway Age. You are doing the carriers and the shipping public a great service in your efforts.

In the June 30 edition you published an editorial about the proposed discontinuance of the "California Zephyr" and, of course, it is understandable that you support the railroad in the effort to discontinue it. However, I do not share that view since I believe that the railroads are capable of operating trans-continental trains on a profitable basis if they will provide the equipment which meets the needs of the public.

The summer before last my wife and I decided to ride the "California Zephyr" from here to Oakland, California on the way to San Francisco and back, in fact I have always found it to be a very delightful experience and a fine train. However, on the trip referred to the train arrived in Salt Lake City one hour and one-half late and was three hours late in arriving in Oakland. This train was set out several times for freight trains and it became quite evident to us that we were "second class" traffic on the railroad.

Furthermore, the cars were not clean and airy, they were musty and showed rather dusty housekeeping practices.

It is my confident belief that if the railroads will clean up the trains, offer a good service, operate their trains on time that many of the traveling public will return to the trains, but not in the kind of cars and train service which we experienced.

Walter G. Koplin
Traffic Manager
Salt Lake Hardware Co.

Railfan Claytor

Harrisonburg, Va.

To the Editor:

Your recent feature on Southern's President W. Graham Claytor, Jr. (July 21) captured the man's unique personality. . . . Graham Claytor is not only respected and greatly admired by thousands of railfans—he is also able to make a tremendously effective alignment with the railroad's customers.

C. Grattan Price, Jr.

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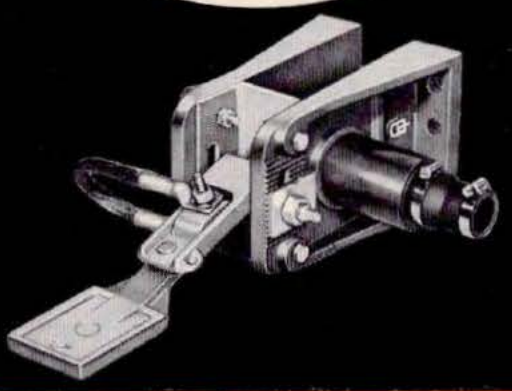

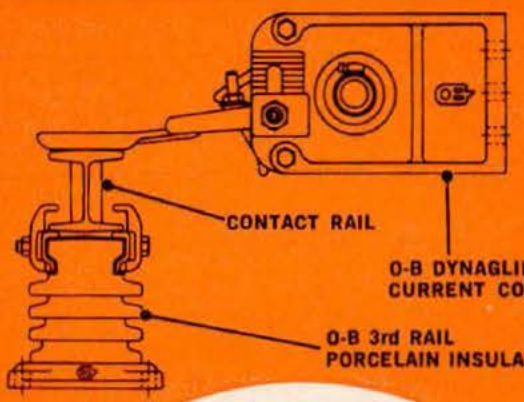

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SUPPLY TRADE

George B. Hynson has been named general manager-product sales, **CF&I Steel Corp.**, with headquarters in Denver. Mr. Hynson, formerly assistant manager rod and wire sales, **Bethlehem Steel Corp.**, succeeds **Edwin F. Lord** who was elected vice president-sales last year (RA, Dec. 9, 1968, p. 32).

George W. Johnson, transportation sales engineer, Industrial Sales Division, **General Electric Co.,** in the East Central and Atlantic Districts, has been appointed domestic locomotive sales manager, Western region, Locomotive Department. Mr. Johnson replaces **F. A. Mitchell,** named manager of product service and maintenance engineering.

P. Taylor Bryan III appointed to the new position of vice president—administration, **St. Louis Car Division, General Steel Industries, Inc.,** St. Louis. Mr. Bryan formerly served as assistant to the president and acting works manager.

Gilbert M. Warren has been elected vice president and assistant to the president, **Keystone Industries, Inc. Harry M. Wood,** executive vice president, has retired.

Richard E. McCoach has been appointed general sales manager, **Ohio Locomotive Crane Co.**

P. L. Cowling has been appointed president and chief executive officer, **General Transport Equipment Co., Inc.,** Chicago, succeeding **Jack J. Hall,** elected chairman of the board. Mr. Cowling was formerly assistant to the president and coordinator of rail-highway sales and services, **Milwaukee.** He also served as vice president and general manager of **The Milwaukee Motor Transportation Co.**

Jackson Vibrators, Inc. has named **H. F. Russell, Russel Railway Supply,** Minneapolis, as sales agent to the Great Northern, Northern Pacific and Soo Line.

Henry T. Fitzhugh has established the **Fitzhugh Railway Equipment Corp.,** at 2500 West Broad Street, Richmond, Va. 23220. The firm will handle sales in the Southeast section of the U. S. for signaling and communications products of the **Western-Cullen Division, Federal Sign & Signal Corp.,** Chicago.

Magnus Metal Corp., subsidiary of **National Lead Co.** has moved its general headquarters from New York to 2234 West 43rd Street, Chicago, Ill. 60609.

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General Steel Industries, Inc. ..... BC
Golden Spike Record Offer ..... IBC
International Nickel Co., Inc., The 9
Monogram Industries, Inc. 4
National Car Rental Systems, Inc. 10
Ohio Brass Company 37
Pullman-Standard 20-21
Railway Educational Bureau 38
Smeco Industries, Inc. 32
Speno, Frank 32
Westinghouse Electric Corp. 26-27

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VIEWPOINT

Mr. Menk meets the professors

This could be just another picture of four men deeply involved in a bull-session. What takes it out of the ordinary is the identity of the men—and how they came to be together.

The tall fellow on the left is, of course, Northern Pacific President Lou Menk. In the center is Edmund A. Nightengale, of the University of Minnesota. At the right are James G. Nelson of Washington State and Maj. Gen. John P. Doyle of Texas A&M. They're summing up the results of a five-day seminar in which NP people and a dozen top transportation/economics professors got down to brass tacks (or steel spikes) on what makes today's railroad tick.

NP's "discovery trip" started in St. Paul and wound up in Seattle. And on the way, NP officers gave detailed briefings in just about every area of railroad operations. What did the professors think about it all? Said Indiana's L. Leslie Waters: "You have given us a look at the real world of railroading." What will come of it all? Well, top educators on such campuses as Harvard, Maryland, Michigan State, Oklahoma, Tennessee, American U., and Oregon, as well as Minnesota, Washington State, Texas A&M and Indiana, have had a new exposure to a vital industry on the move. It figures that what they saw and heard about will somehow be reflected in their own academic operations.

Railroad men sometimes complain that there's an understanding gap between their industry and the universities. Railroad men say that the profs don't really know what's going on in that "real world." Campus-recruiting problems are blamed partly on a brand of education which doesn't recognize what railroads are, what they're doing, what opportunities they actually have.

Northern Pacific has taken one step—and not such a small one at that—toward closing whatever understanding gap may exist. The "discovery trip" idea is a good one—well worth expanding upon.

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